

Magual of Instruction



Data Processing System Instructional Logic Diagrams Volume **4**

BM Form-56 398

Ausgabe August 1962

DIAGRAMS INTERMEDIATE LEVEL 1401

-4	CLOCKING AND STORAGE
10-22	DATA FLOW AND CONTROLS
25-34	ARITHMETIC OPERATIONS (ADD, SU8T, MULT, DIV)
35-40	MOVE AND LOAD (MOVE, LOAD, CLEAR, EDIT, COMPARE)
41-44	ADVANCE PROGRAMMING (Q OPR, STORE)
45-52	LOGIC OPERATIONS (BRANCH, NO OP, STOP)
53-58	1406 EXPANDED STORAGE
60-79	INPUT/OUTPUT (READ, PRINT, PUNCH AND OPTIONS)
80-89	MAGNETIC TAPE

CLOCKING AND STORAGE

- I CLOCK CONTROL AND CLOCK PULSES
- 2 STORAGE DECODE SWITCHES
- 3 CURRENT SWITCHES, INHIBIT DRIVERS

4 PRESENSE AND SENSE AMPLIFIERS

OATA FLOW AND CONTROLS

- 10 DATA FLOW A, B Reg
- DATA FLOW CONTROLS
- 12 INHI8IT CHECK AND A AND B CHECK
- 13 CYCLE CONTROL
- 14 AOORESS STOP, I RING, PROG SKIP
- 15 OP REGISTER, OP CODE DEVELOPMENT
- 16 OP COOE AND OP CHECK
- 17 A STAR AND 8 STAR
- 18 I STAR, AUTO SCAN, STAR MANUAL SET
- 19 STAR MODIFIER AND CONTROLS
- 20 MODIFIER
- 21 MODIFIER AND ADDRESS VALIDITY CHECK

ARITHMETIC OPERATIONS

- 25 ADD SUBT AND ADDER CONTROL
- 26 ADD SUBT AND ADDER CONTROLS
- 27 A AUX STAR ANO GATE CONTROLS
- 28 8 AUX STAR AND GATE CONTROLS
- 29 MULTIPLY AND DIVIDE CONTROLS
- 30 MULTIPLY AND DIVIDE CONTROLS
- 31 MULTIPLY AND DIVIDE CONTROLS
- 32 MULTIPLY AND DIVIDE CONTROLS

MOVE AND LOAD

- 35 MOVE, LOAD, CLEAR, AND COMPARE
- 36 COMPARE
- 37 HI LO EQUAL COMPARE
- 3B ZONE TEST AND WORD MARK SET
- 39 EDIT AND EXPANDED EDIT
- 40 EXPANDED EDIT ASTERISK AND DECIMAL OPTION

ADVANCE PROGRAMMING

- 41 ADVANCE PROGRAMMING Q OPR, STORE LOGIC OPERATIONS
- 42 ADVANC PROGRAMMING CONTROLS

LOGIC OPERATIONS

- 45 BRANCH, NO OP AND STOP OPR
- 50 RAMAC AND INQUIRY
- 51 RAMAC AND INQUIRY
- 52 51 COLUMN FEED

1406 EXPANDED STORAGE

- 53 MODIFY OP AND STORAGE CONTROL PULSES
- STORAGE DECODE SWITCHES 4 TO 12K
- CORE STORAGE DRIVE CKTS AND SENSE CKTS 4 TO 12K
- 56 STORAGE DECODE SWITCHES 12 TO 16K
- CORE STORAGE ORIVE CKTS AND SENSE CKTS 12 TO 16K
- FULL STORAGE PRINT OUT

INPUT/OUTPUT

- 60 DATA FLOW AND READ CONTROLS
- 61 PUNCH DATA FLOW
- 62 PUNCH CONTROLS AND PFR OPTION
- READER AND PUNCH CHECK CIRCUITS
- PFR DATA FLOW, CHECKING AND CONTROLS
- 65 PFR PUNCH CONTROLS
- PFR READ PUNCH CONTROLS
- COLUMN SINARY READ CONTROLS AND DATA FLOW
- MOVE COLUMN BINARY CONTROLS
- PRINT DATA FLOW
- PRINT COUNTERS
- PRINT RINGS
- PRINT CONTROLS
- PRINT BUFFER STORAGE AND DATA FLOW
- PRINT BUFFER RINGS AND CONTROLS
- PRINT .8UFFER COUNTER
- PRINT BUFFER CONTROLS
- PRINT BUFFER CONTROLS
- CARRIAGE CONTROLS
- OUAL SPEED CARRIAGE CONTROLS

MAGNETIC TAPE

- 80 READ AND WRITE TAPE
- BI READ AND WRITE TAPE WITH WORD MARKS
- 82 TAPE CONTROL CODES
- 83 TAPE BRANCH COOES
- 84 READ COMPRESSED TAPE
- 85 MANUAL TAPE OPERATION, RESET AND LOAD
- 86 EXPANDED TAPE
- 87 I/O BRANCH
- 88 I/O SELECT

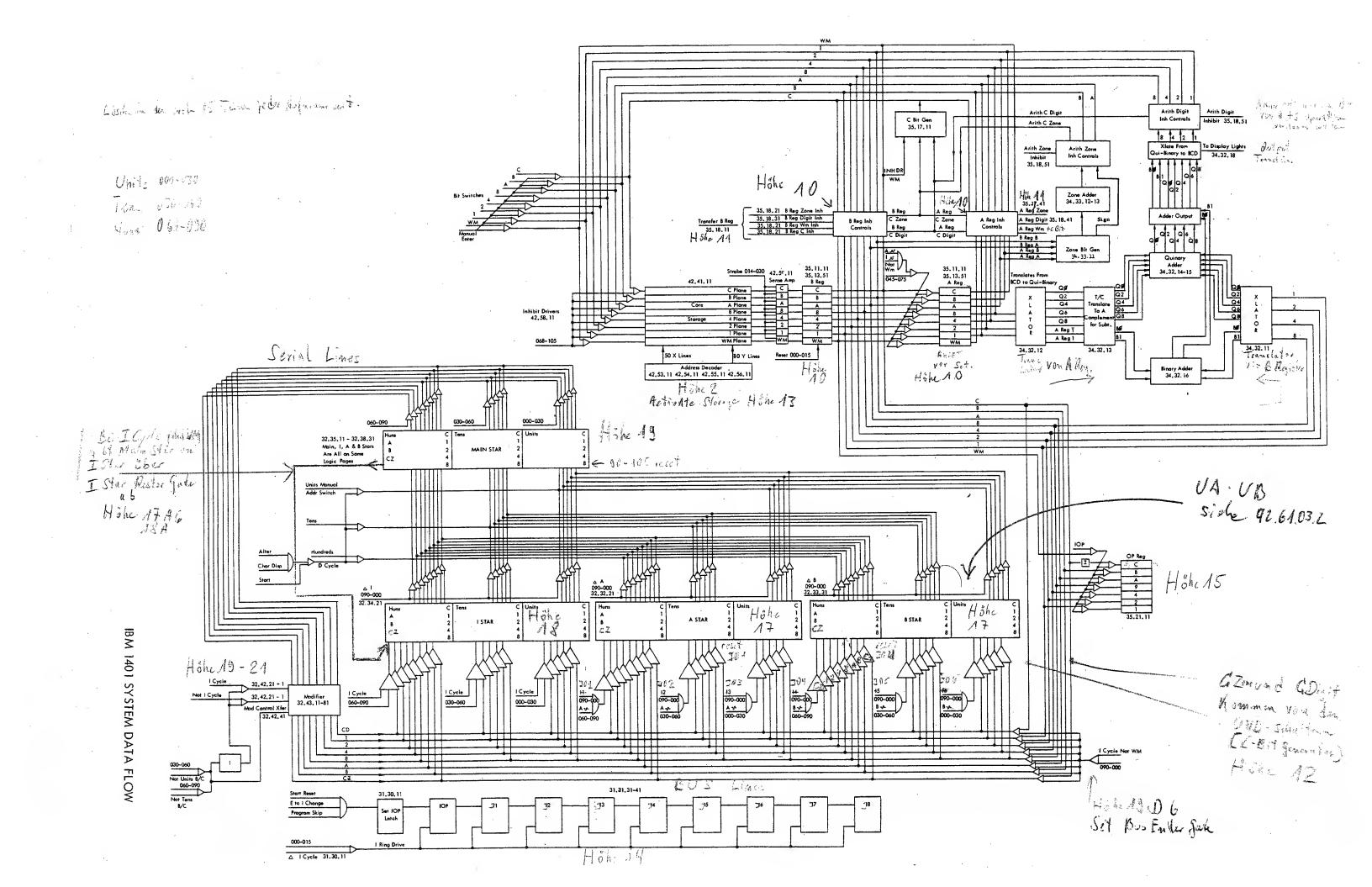
Unit's Addr. Me A or B Bit = 0000 - 3999 A Bit = 4000-7999 B Bit = 8000-11909 A+B But = 12000-16000

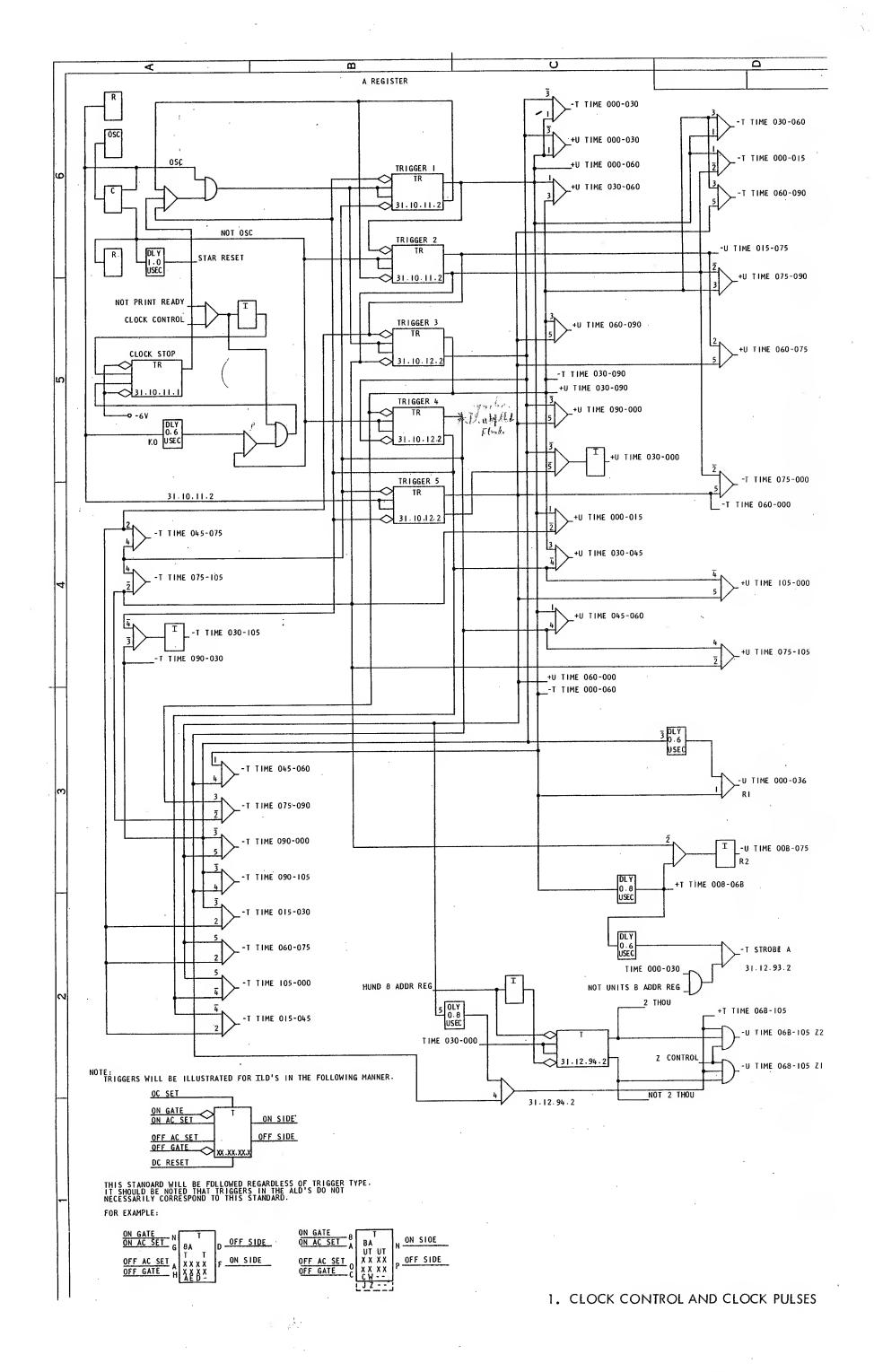
Hundr. Addr

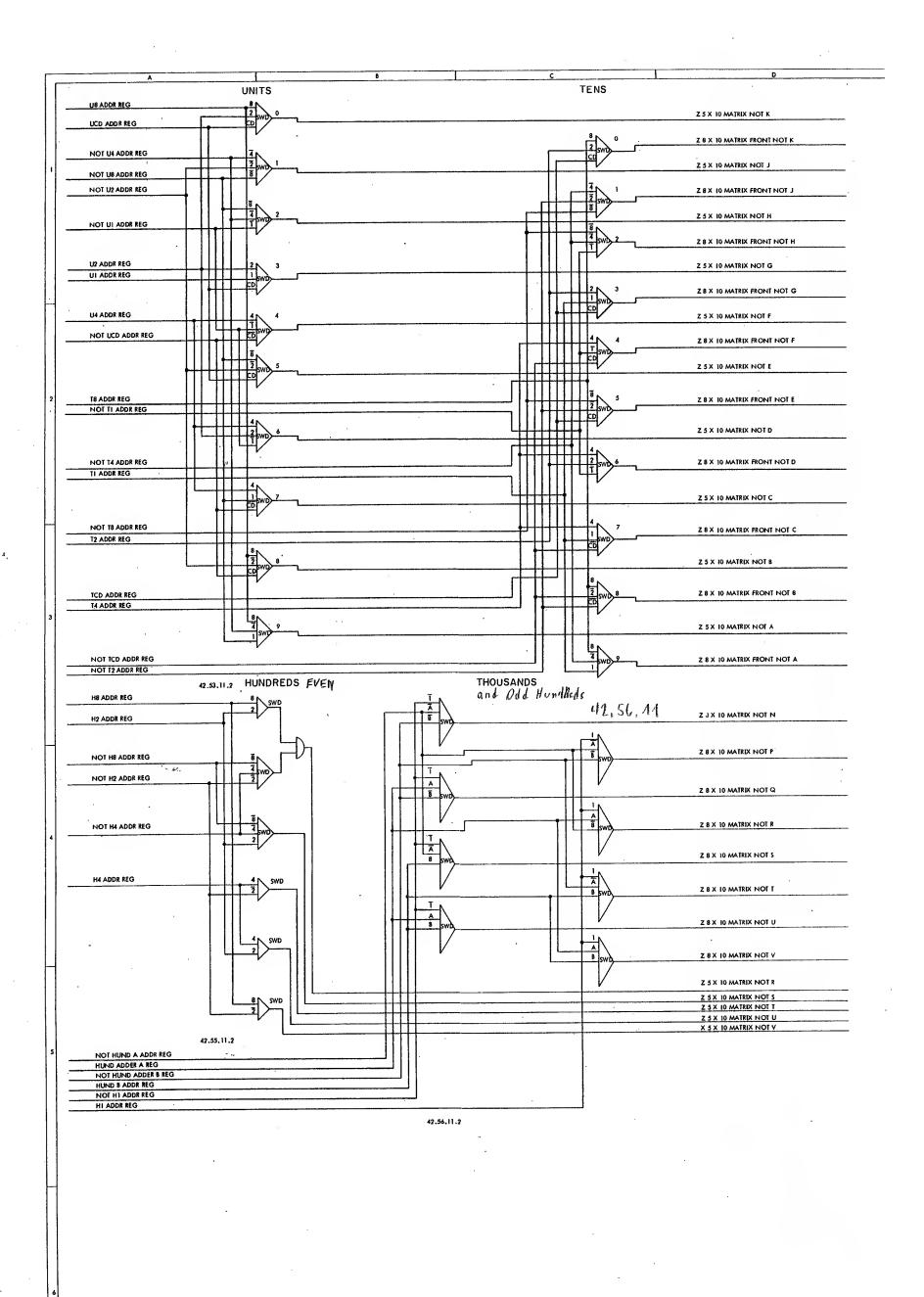
ac A or BBH = 1000 - 999 A Bit = 1000-1999

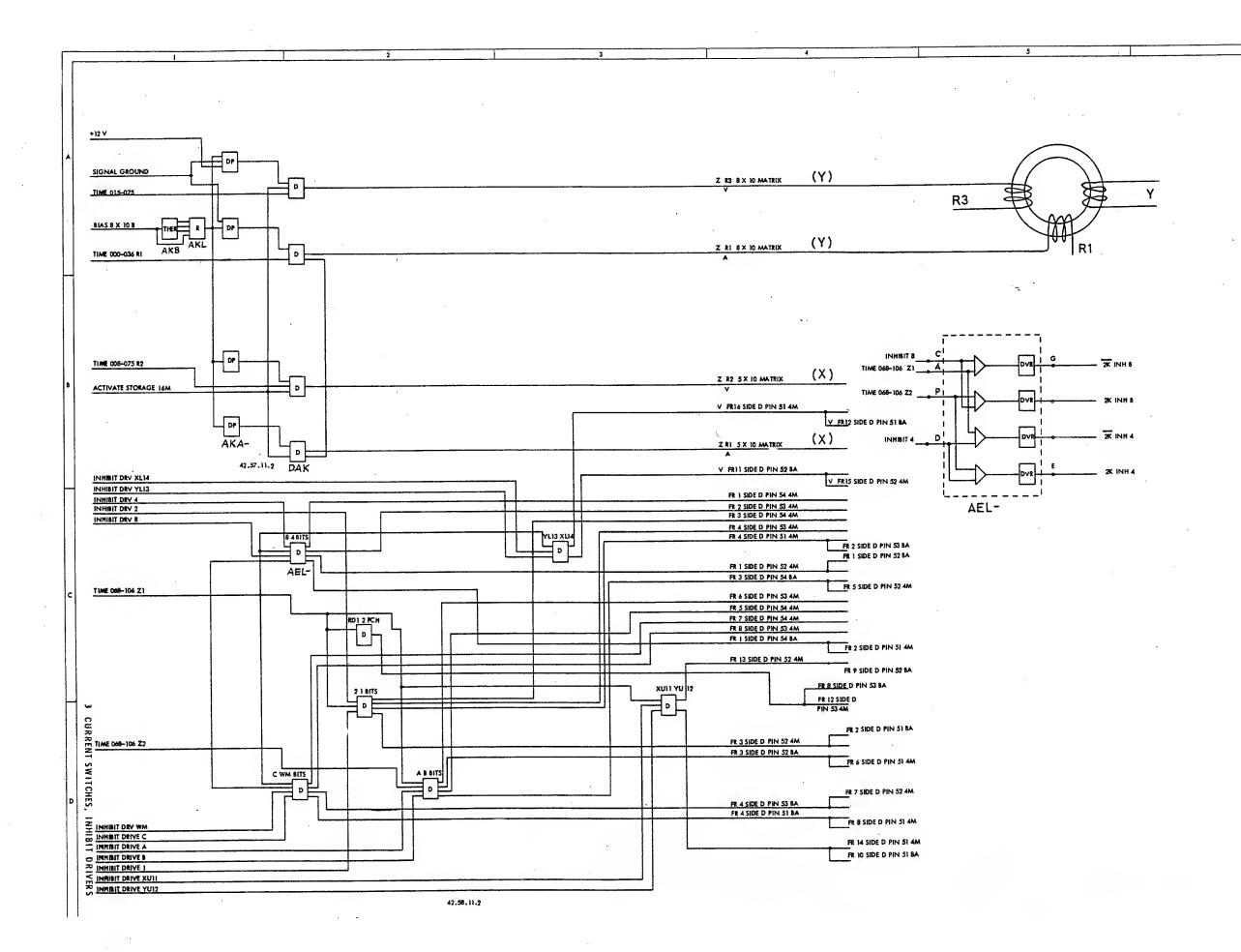
B Bit = 2000-2999

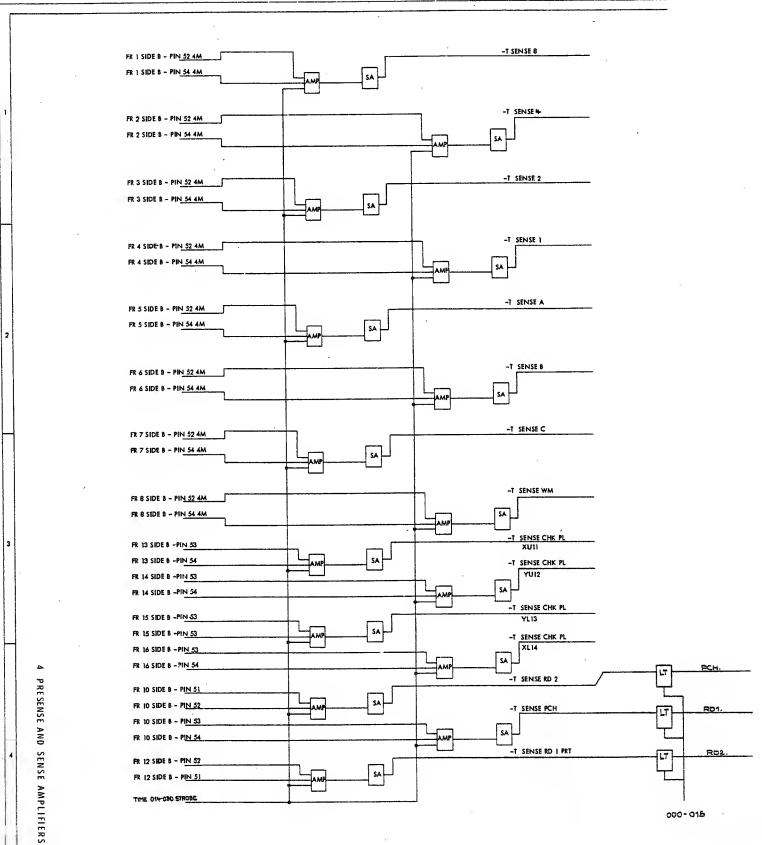
A+B BH = 3000 - 3999

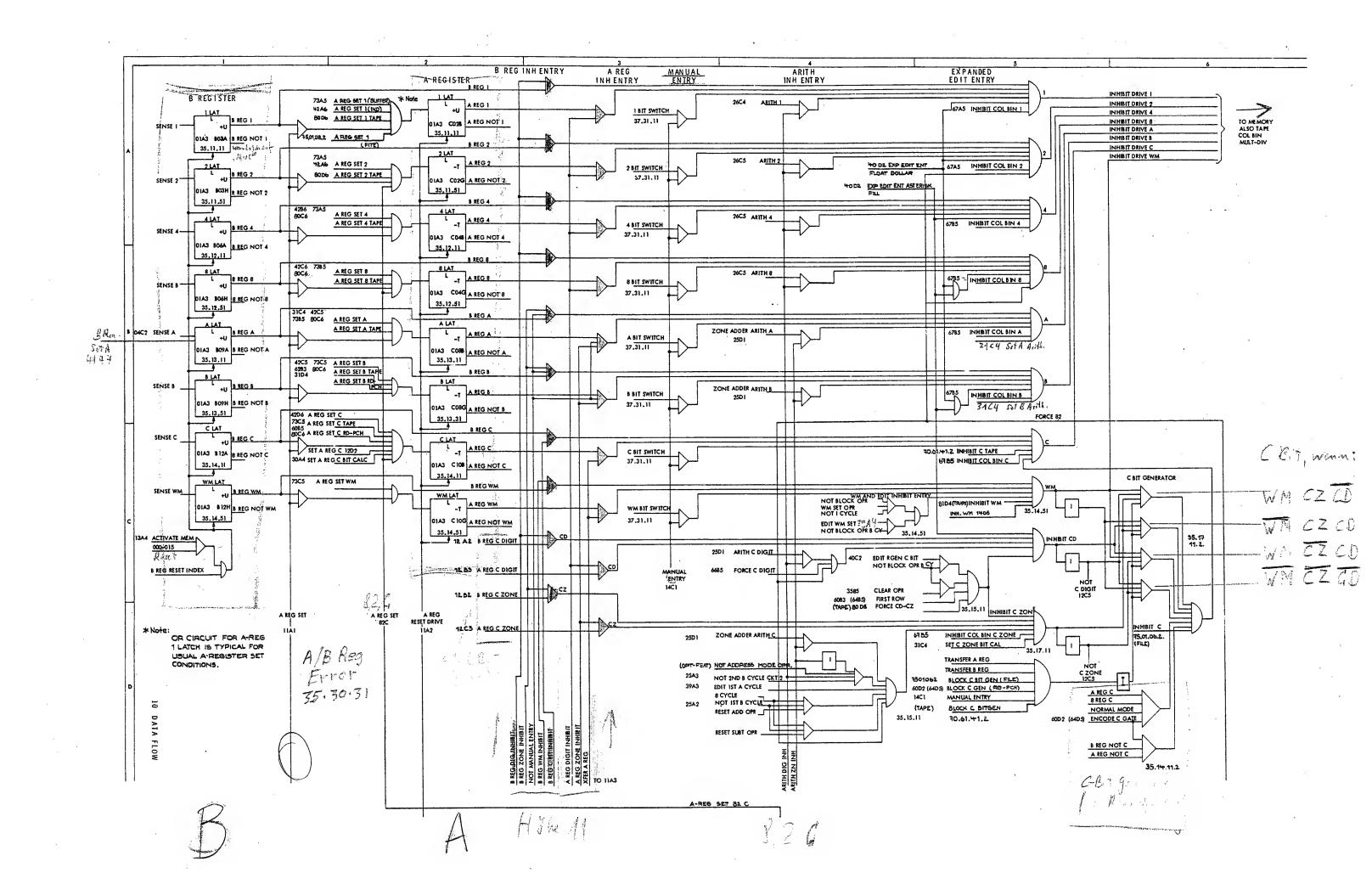










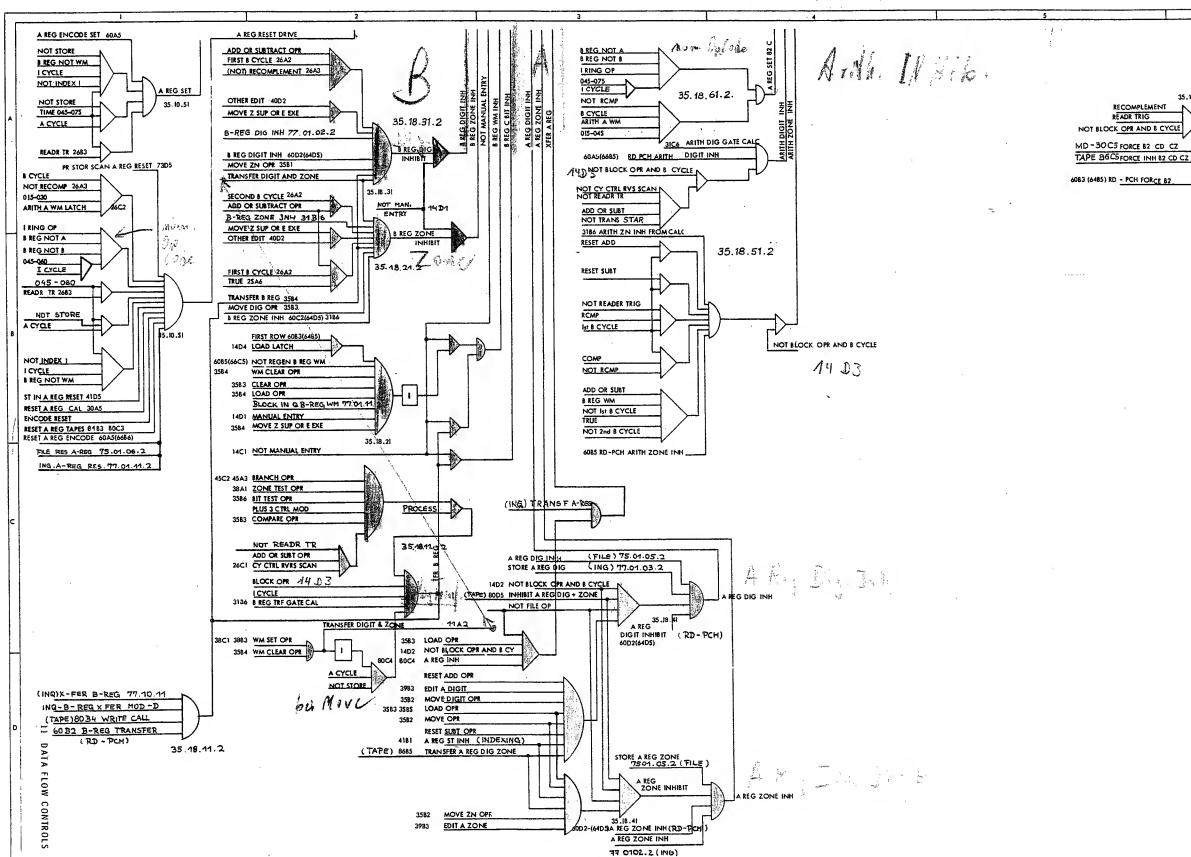


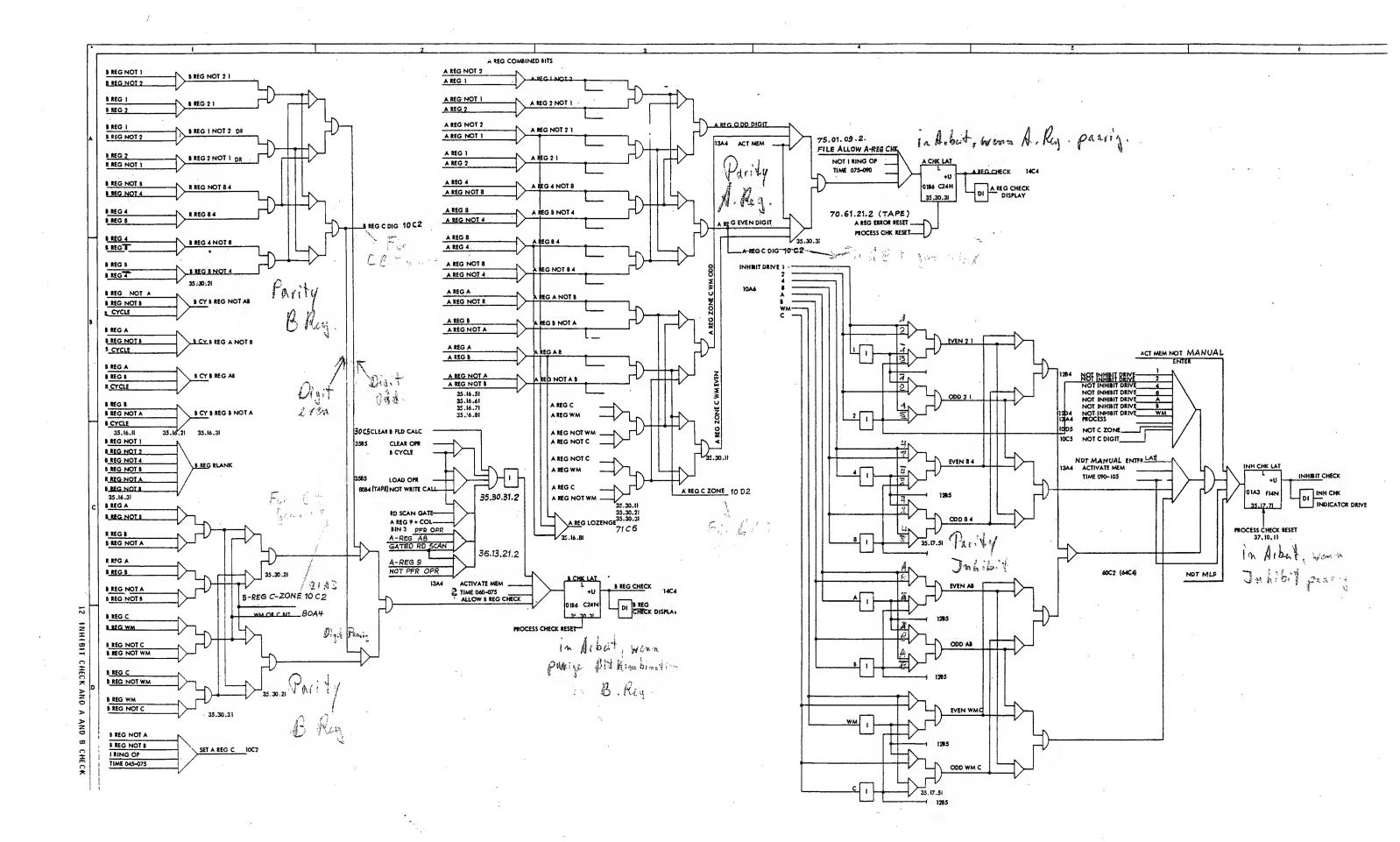
FORCE 82

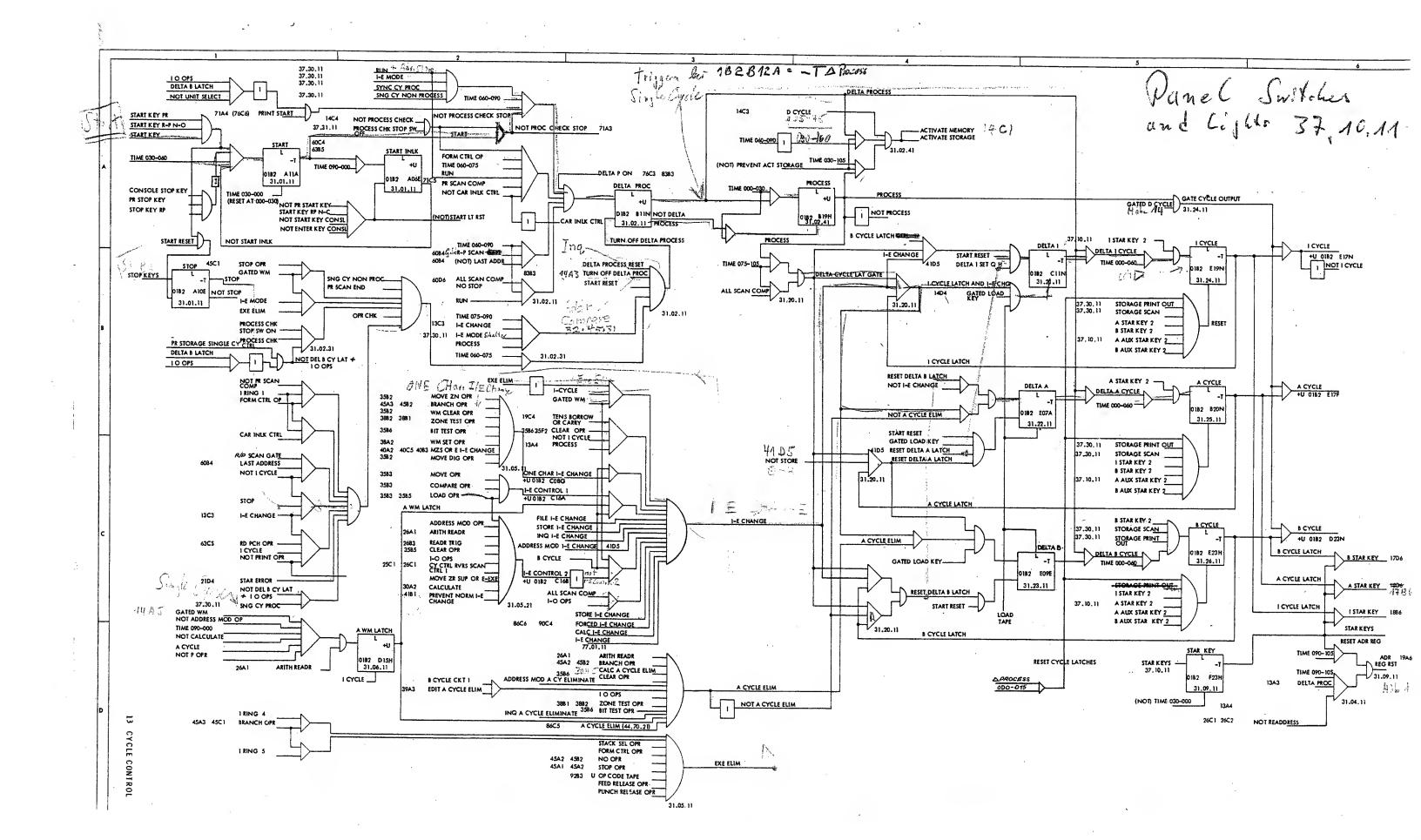
RECOMPLEMENT READR TRIG

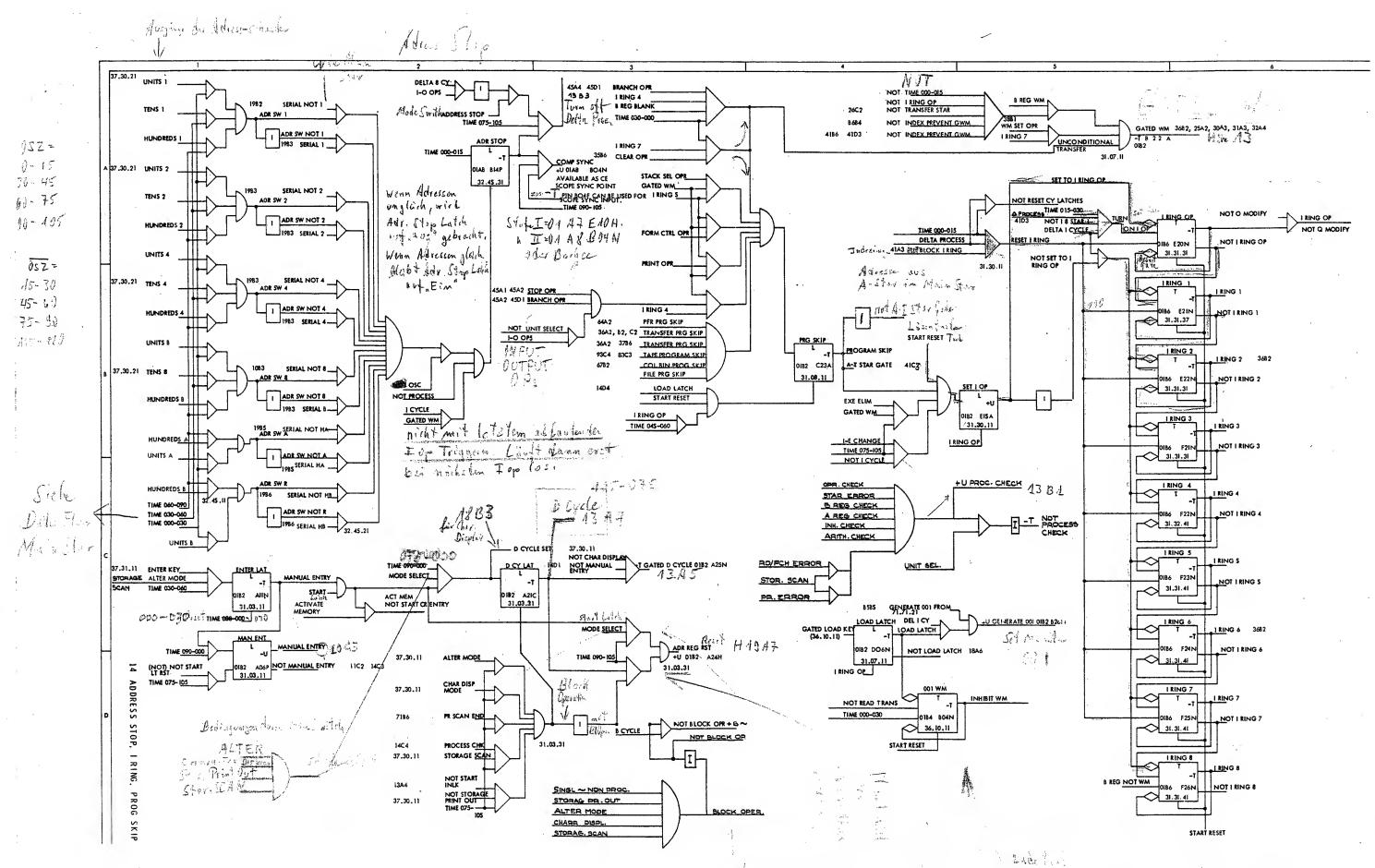
Asig 10

in On Biffin

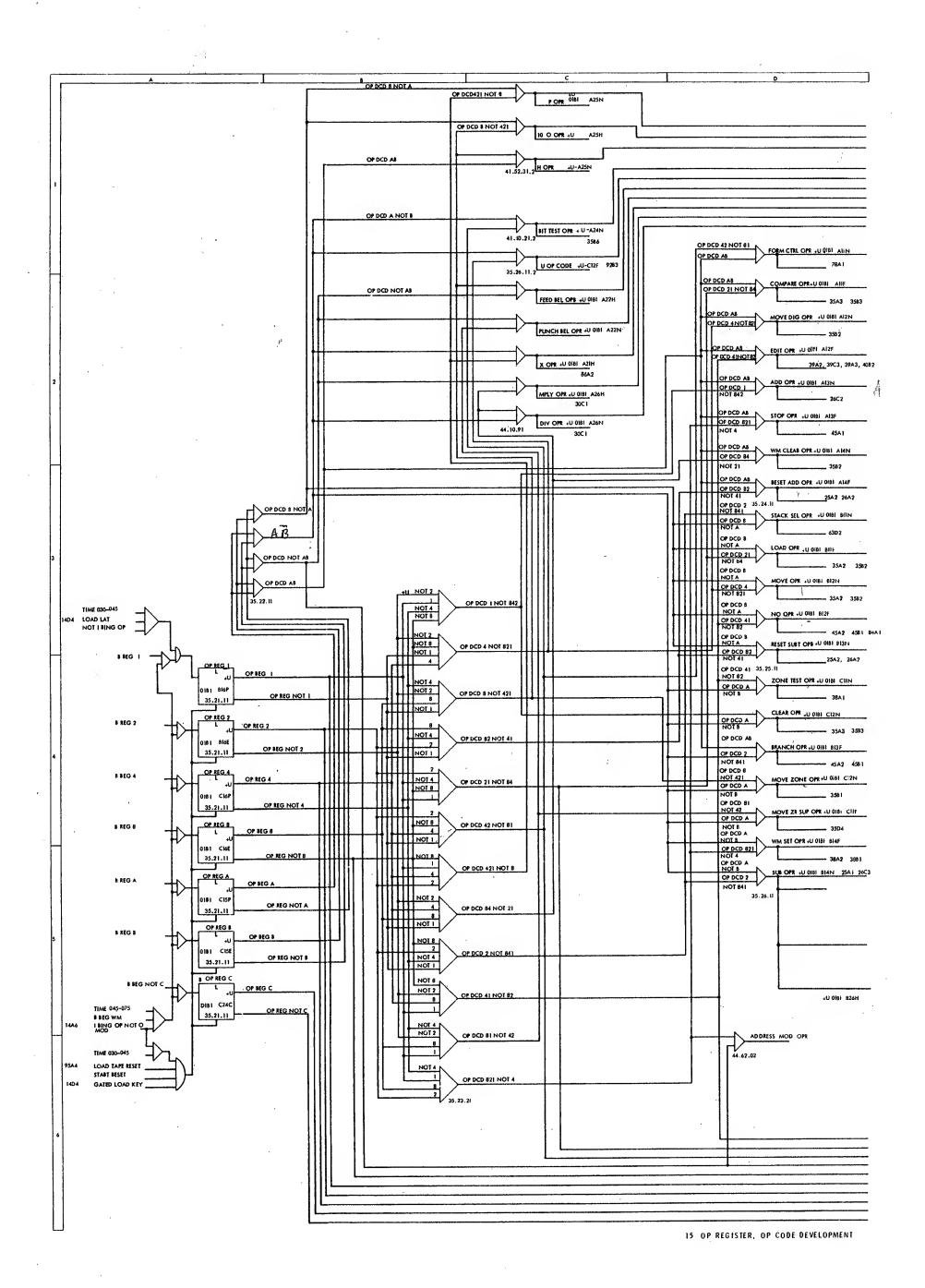


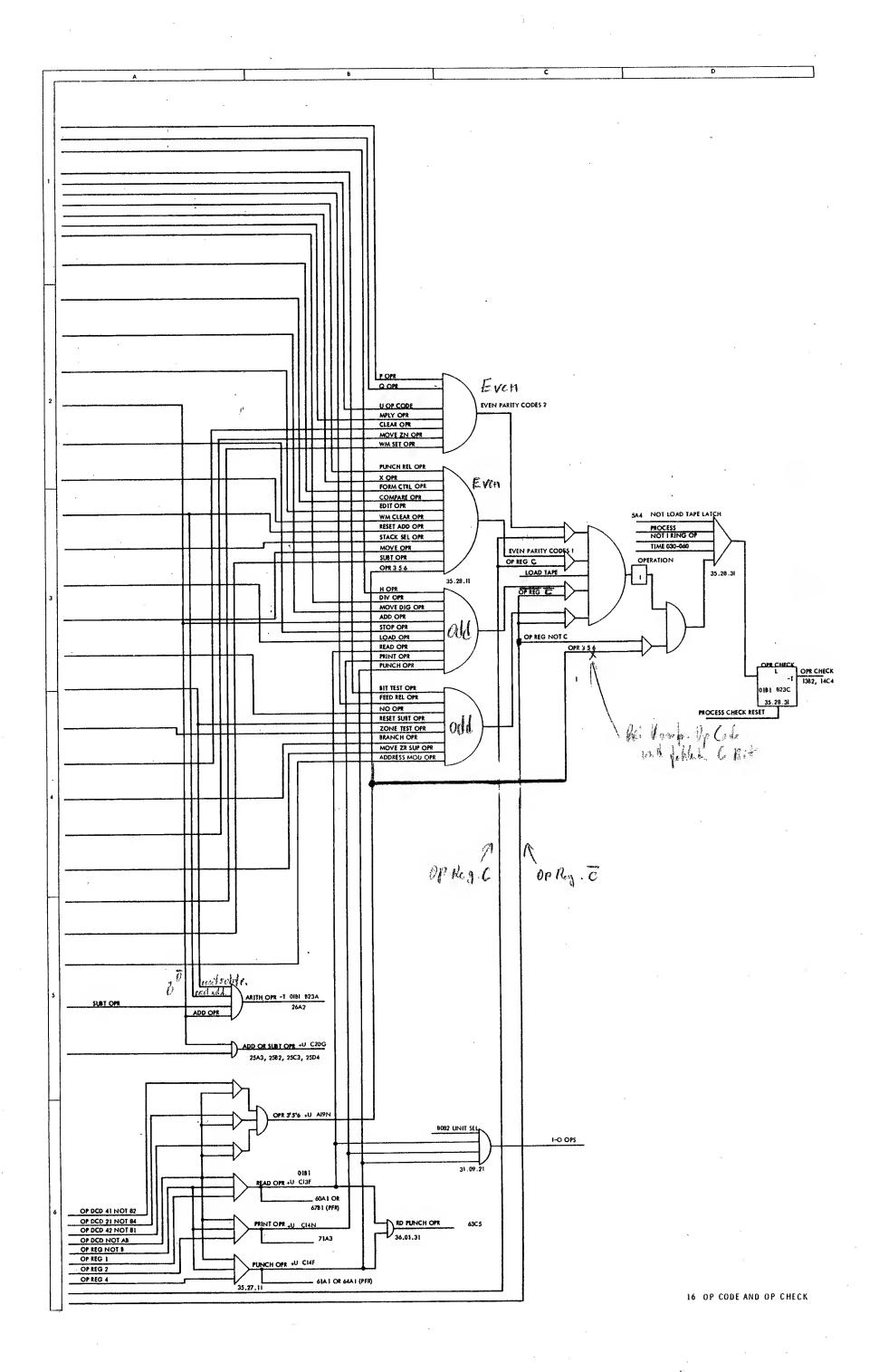


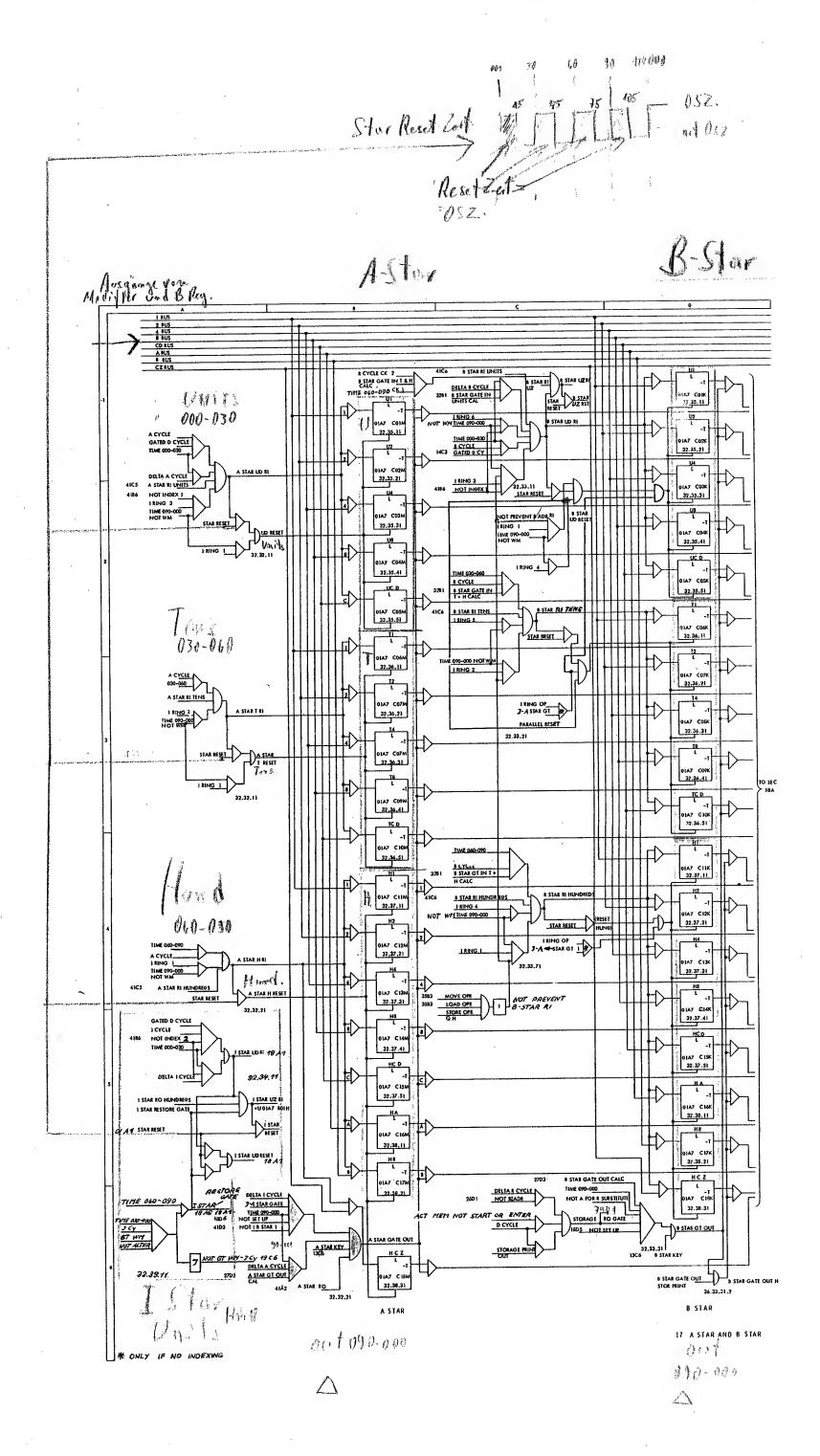




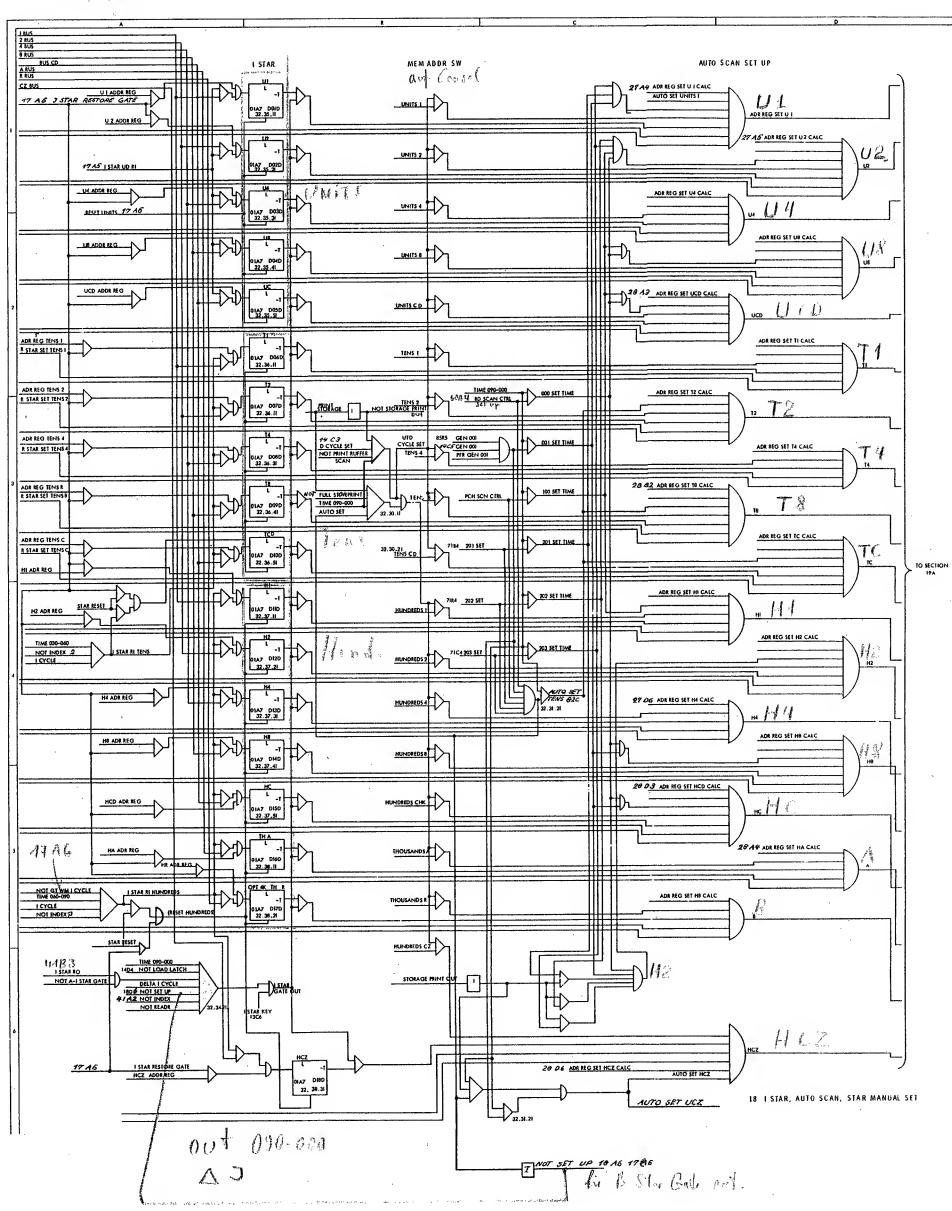
Tape Sele 85

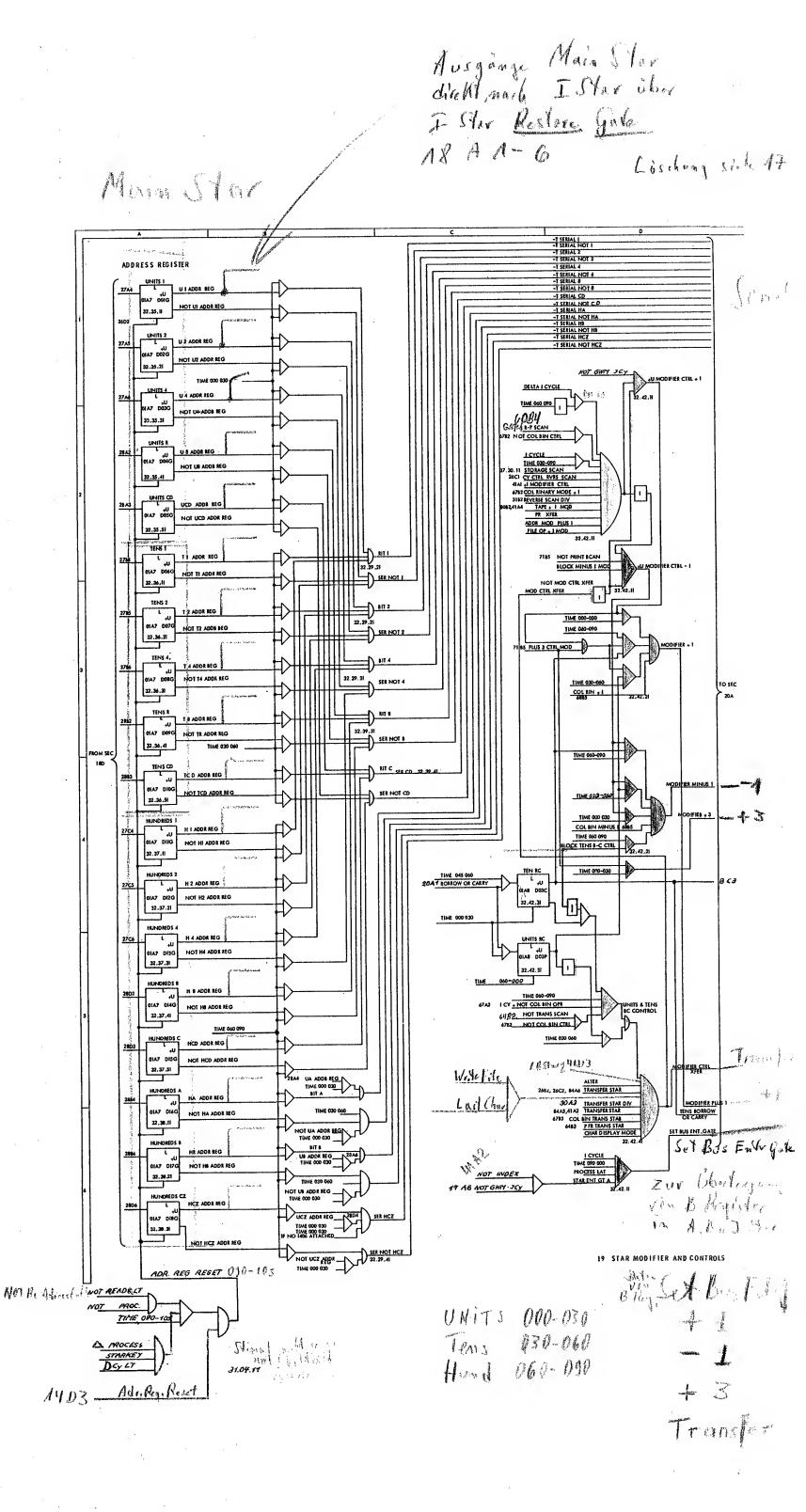


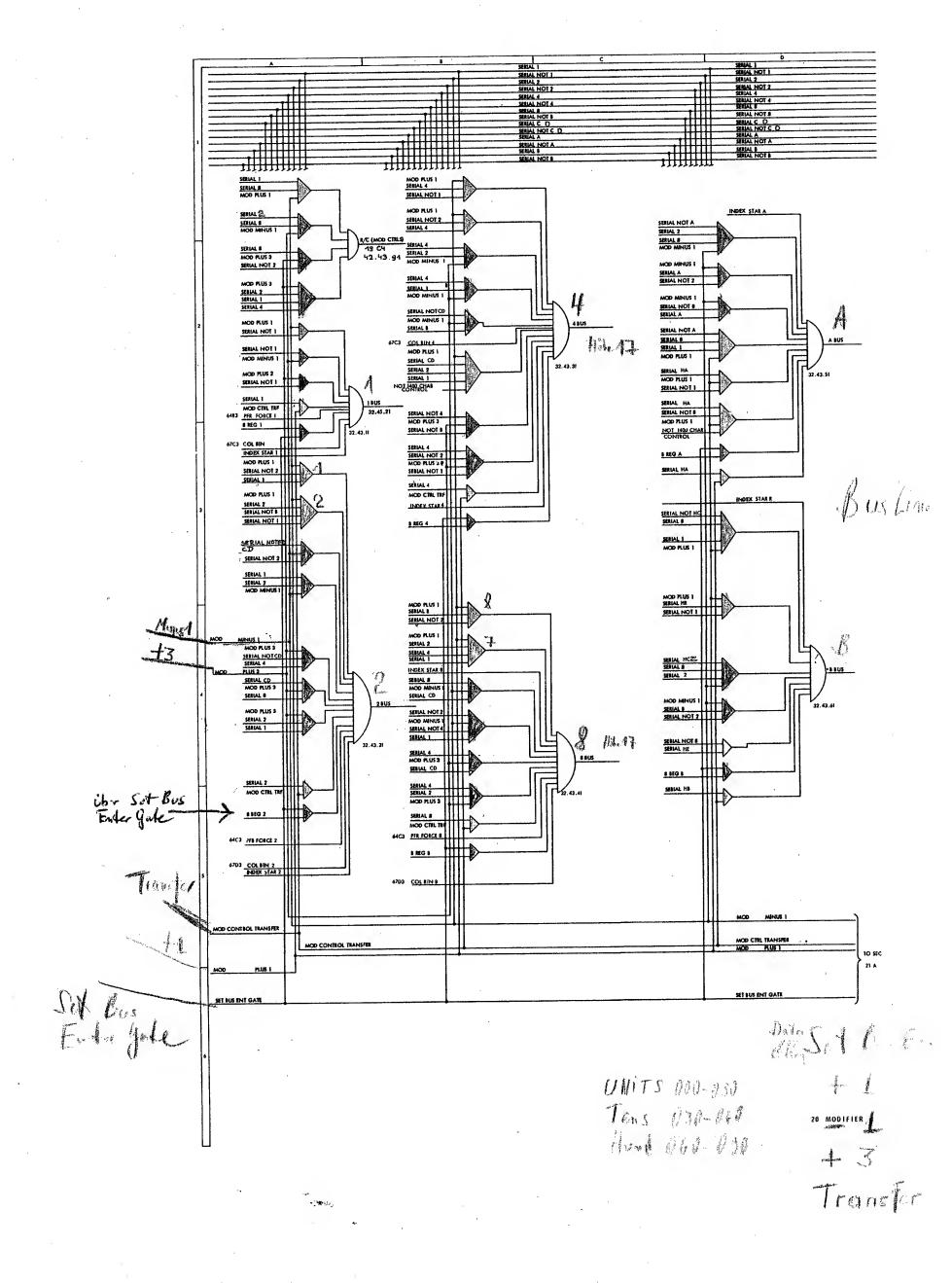


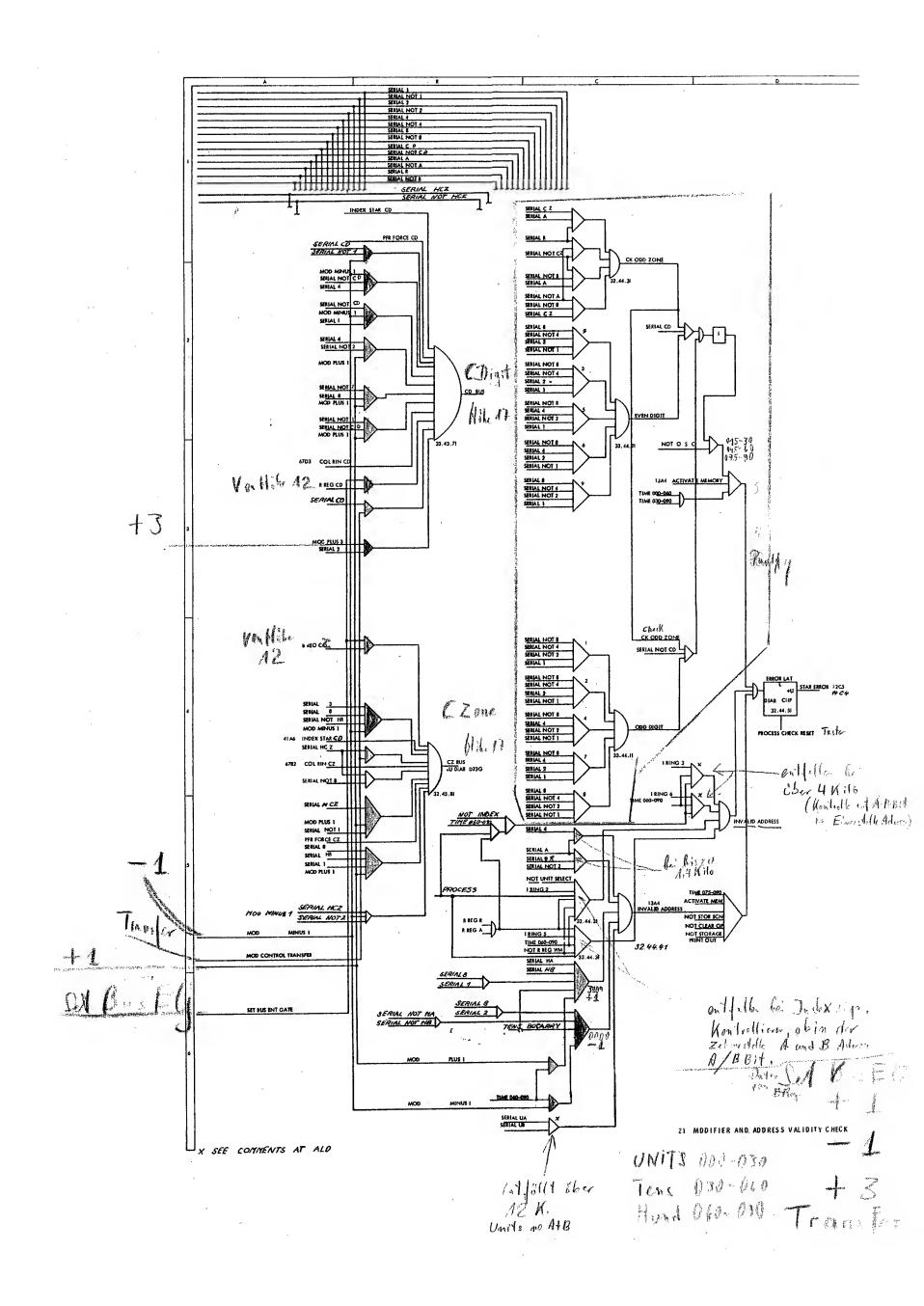


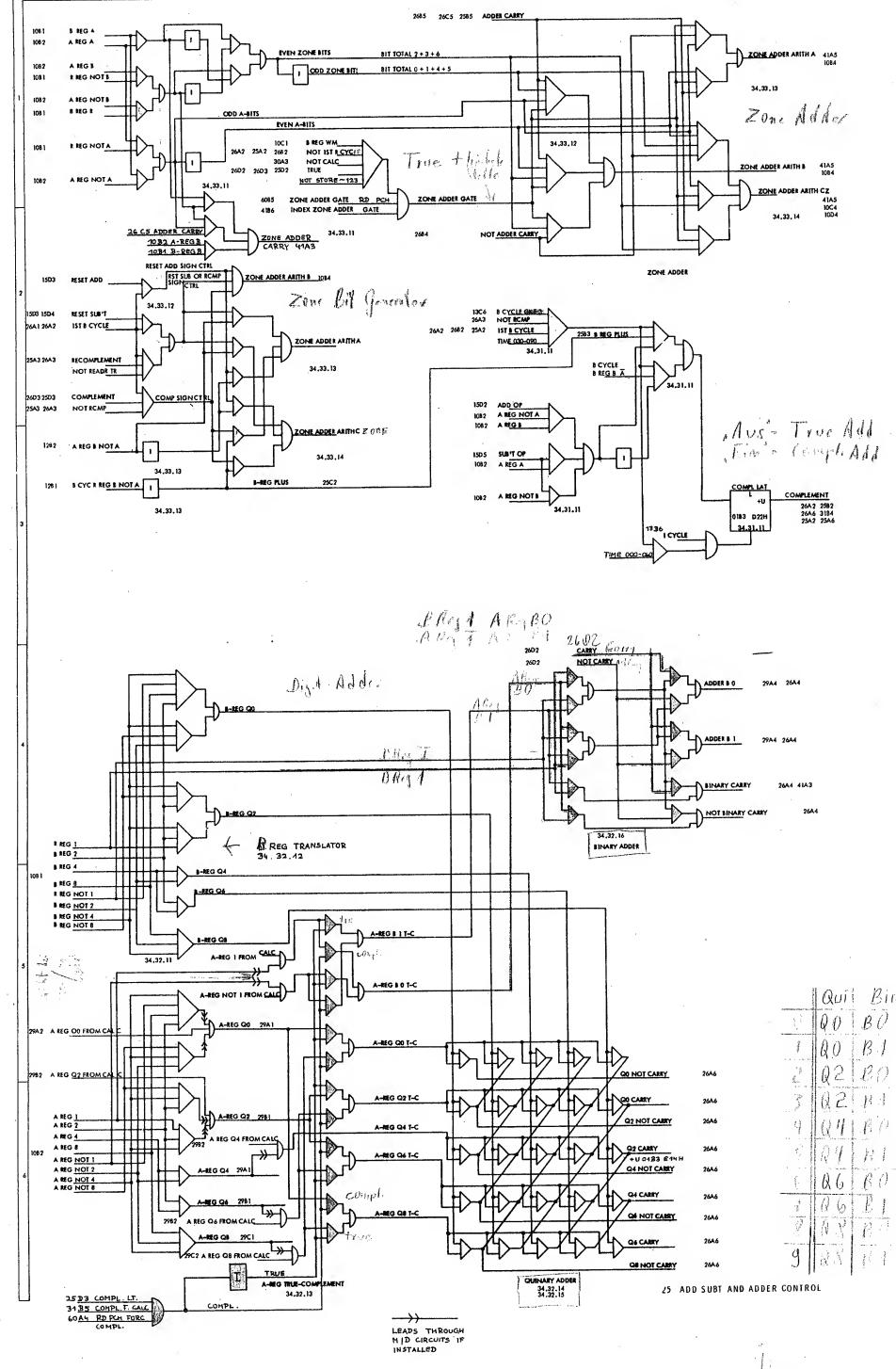
Product Tolay



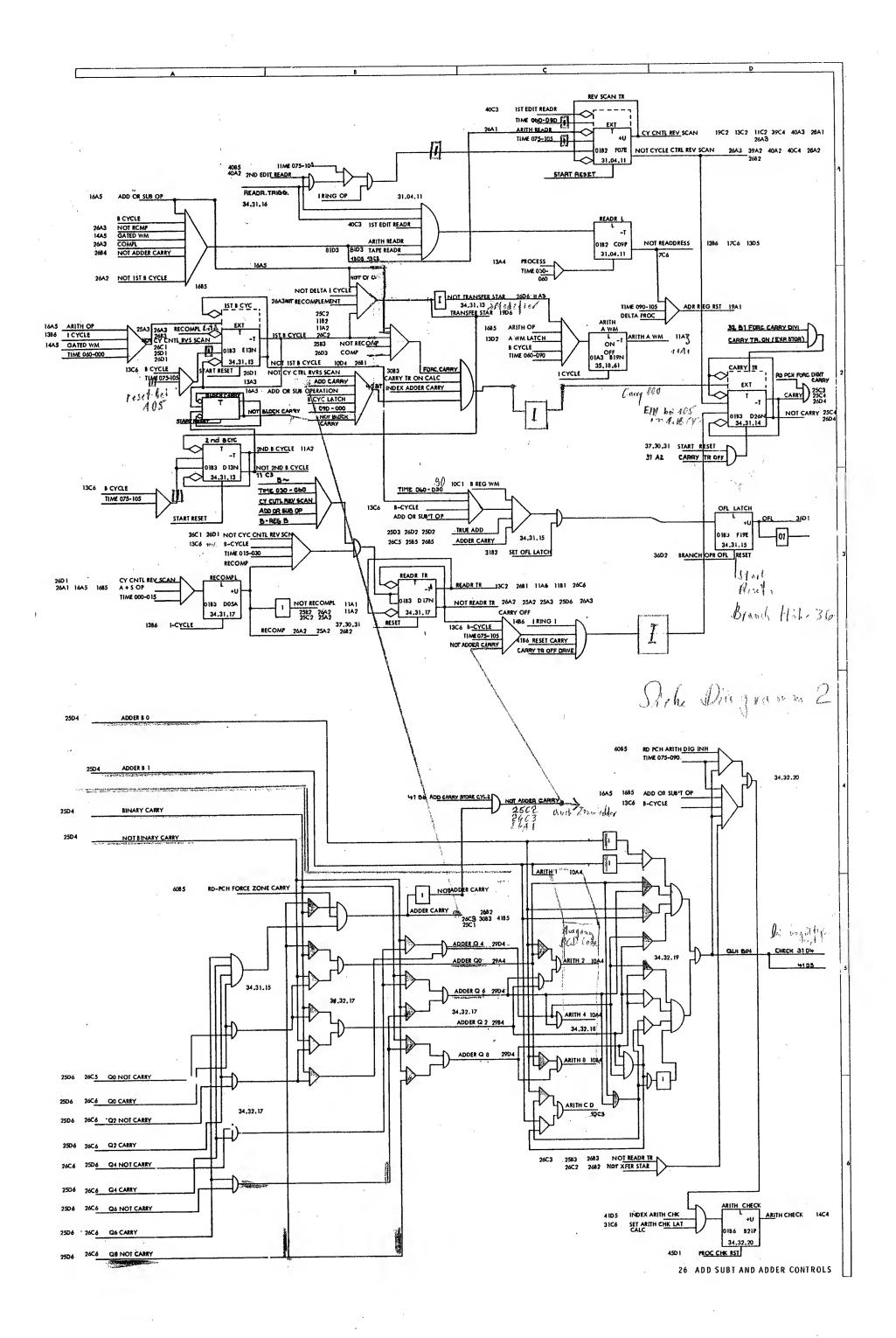


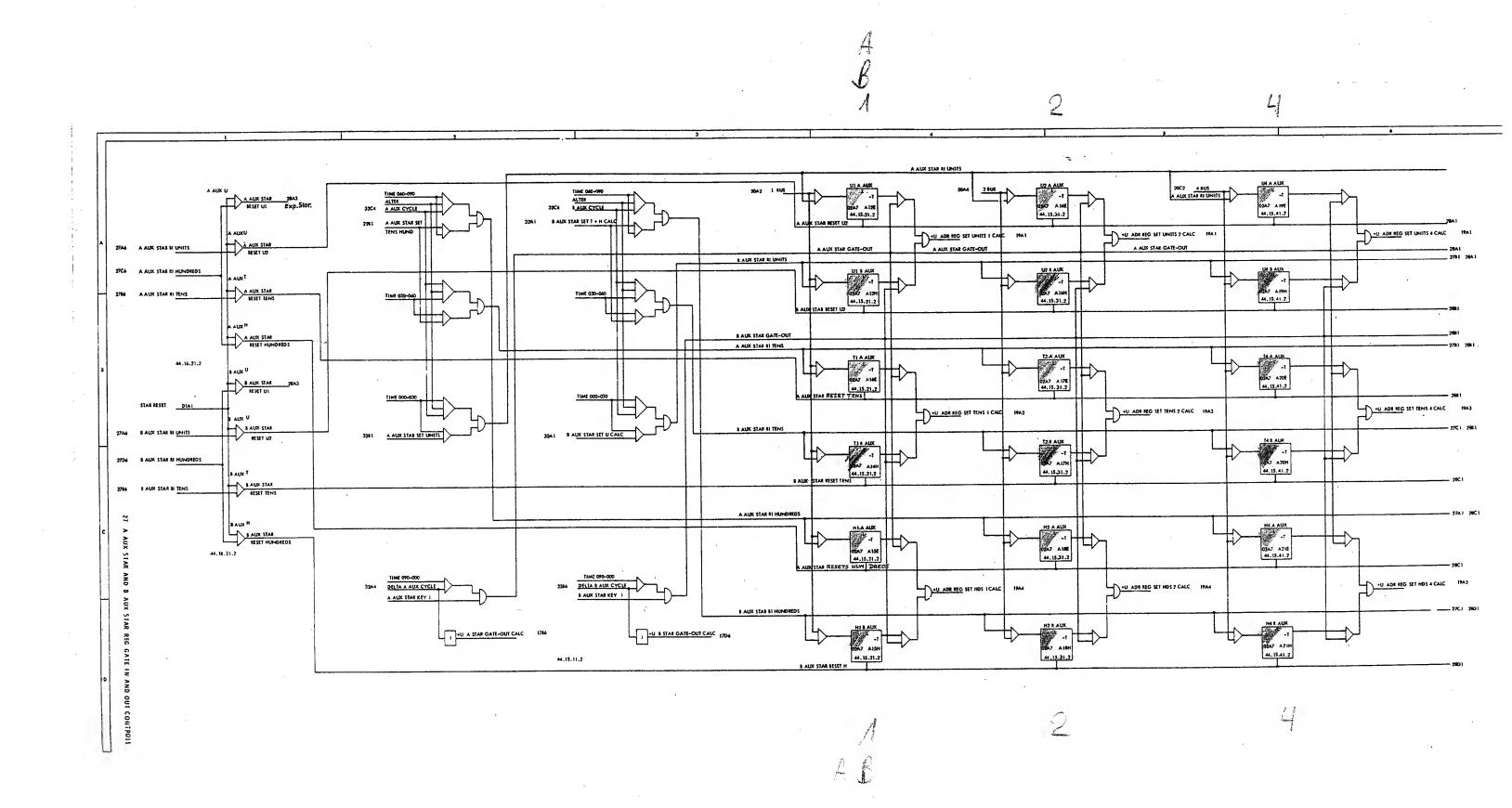


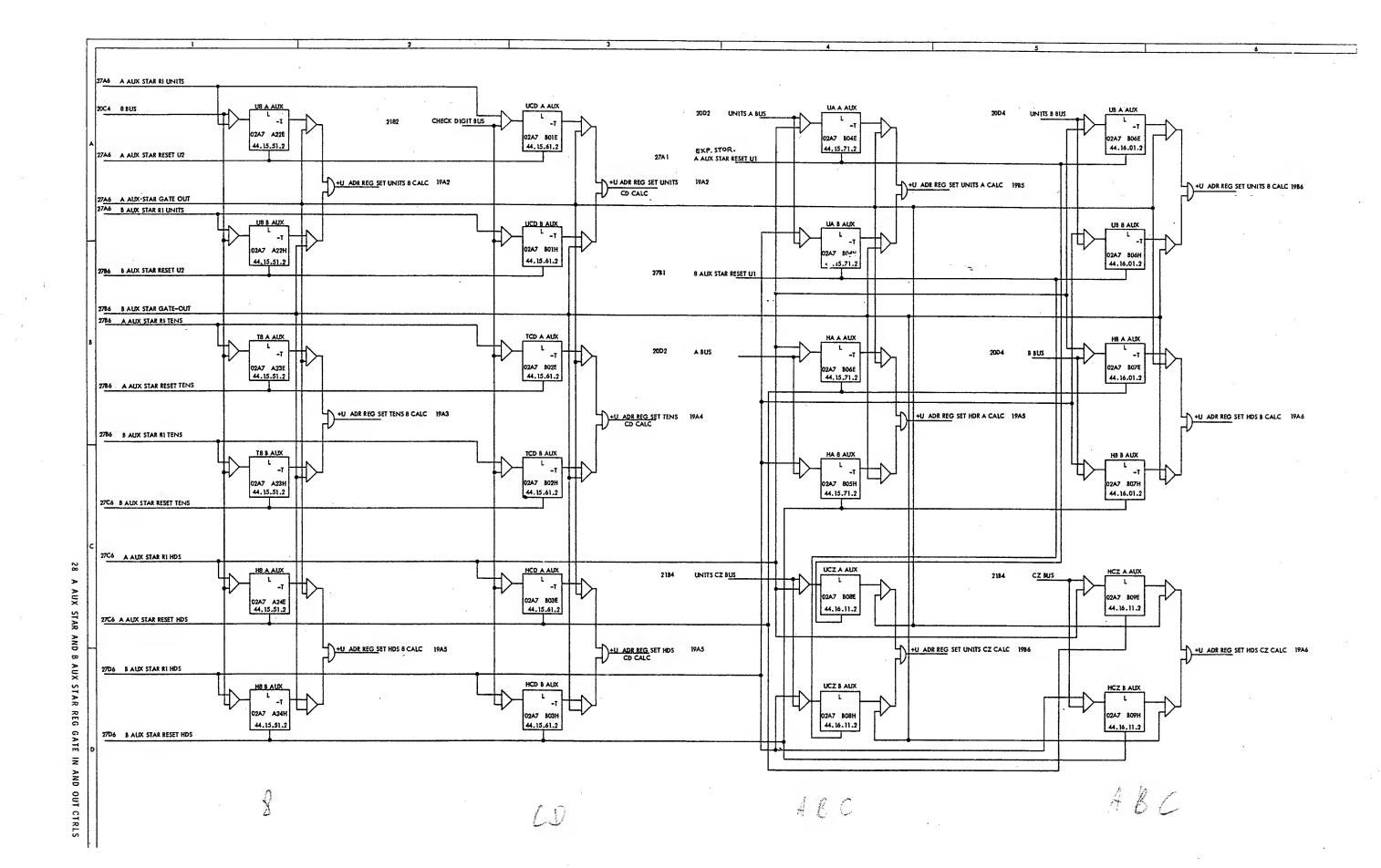


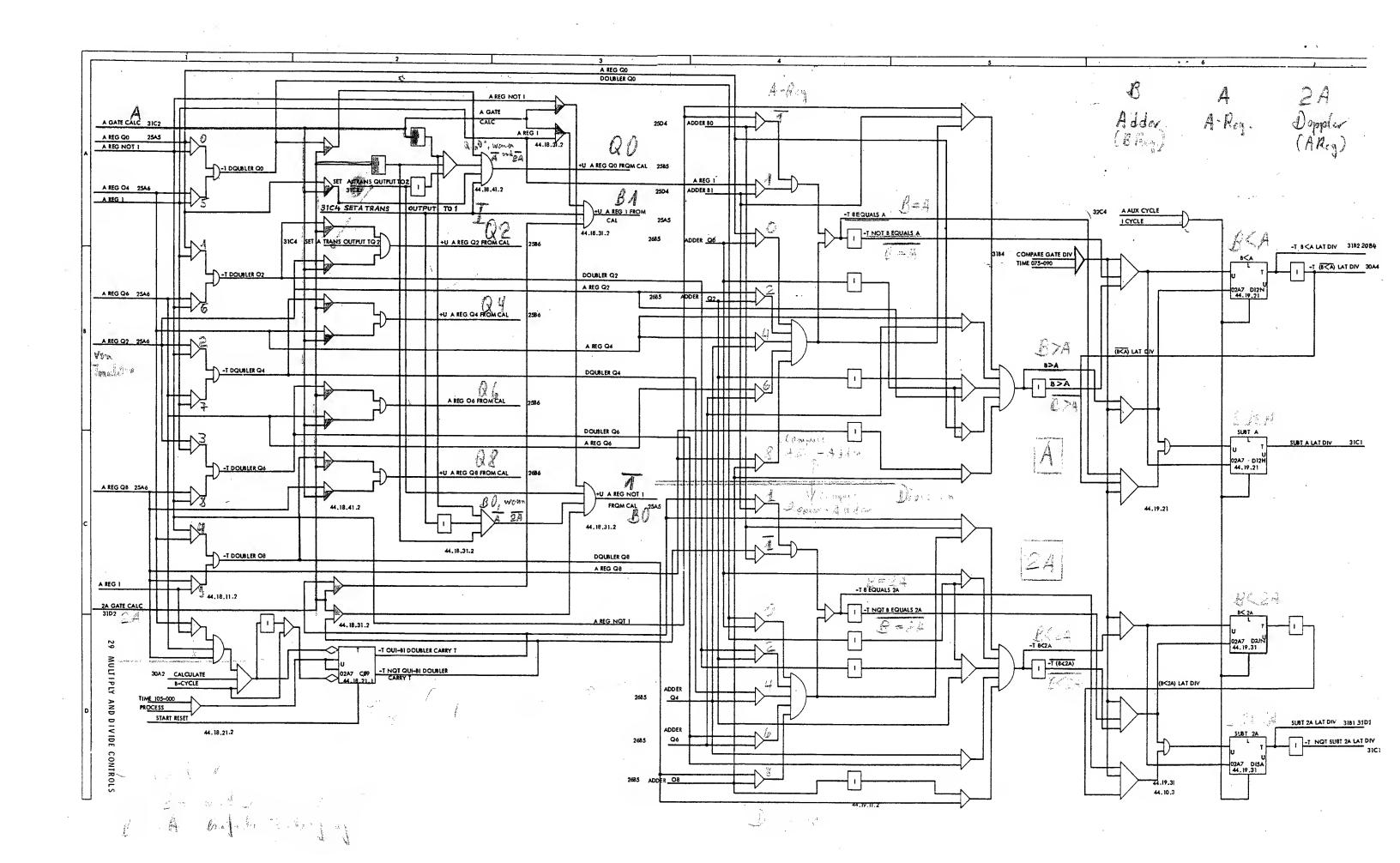


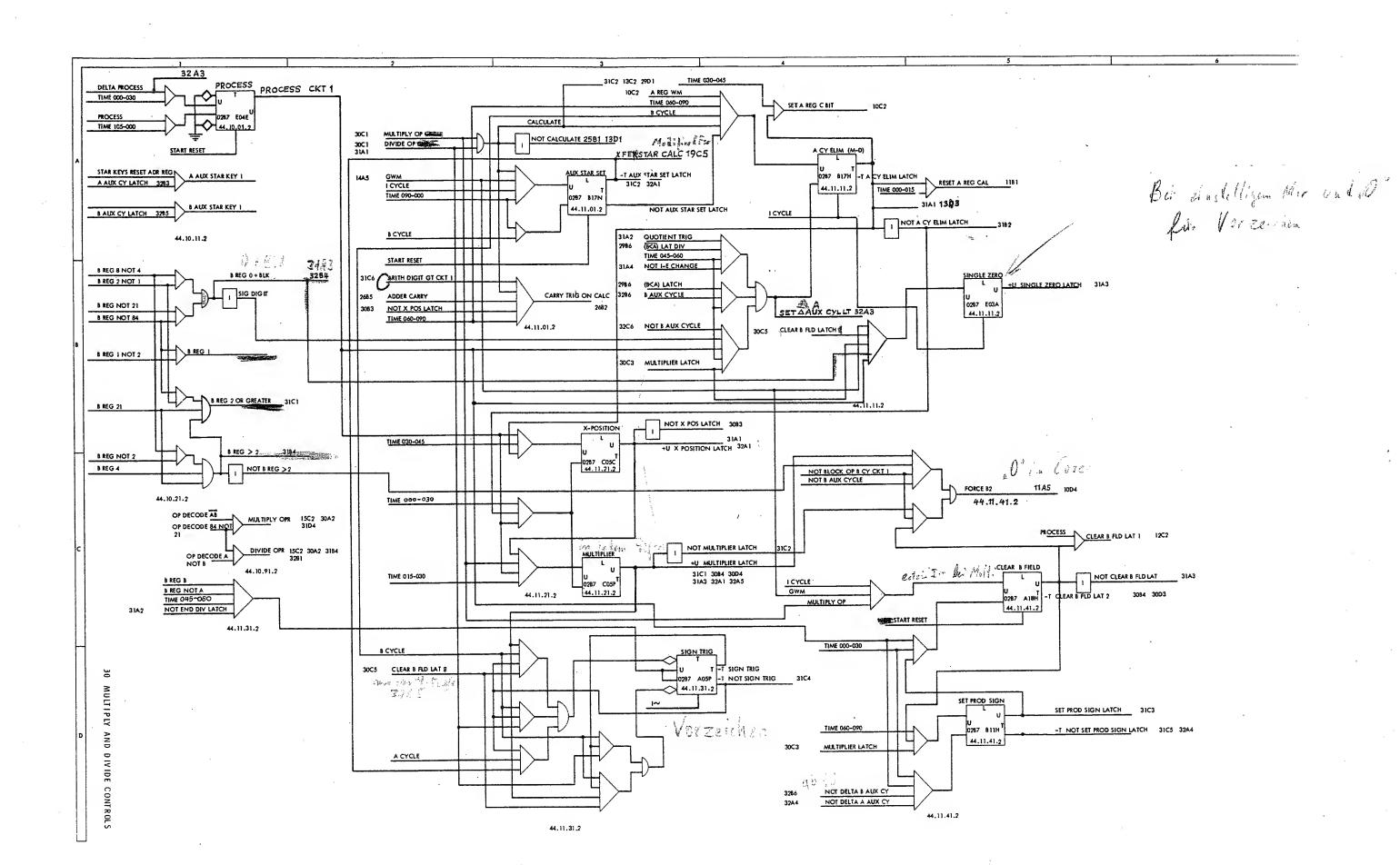
Complex

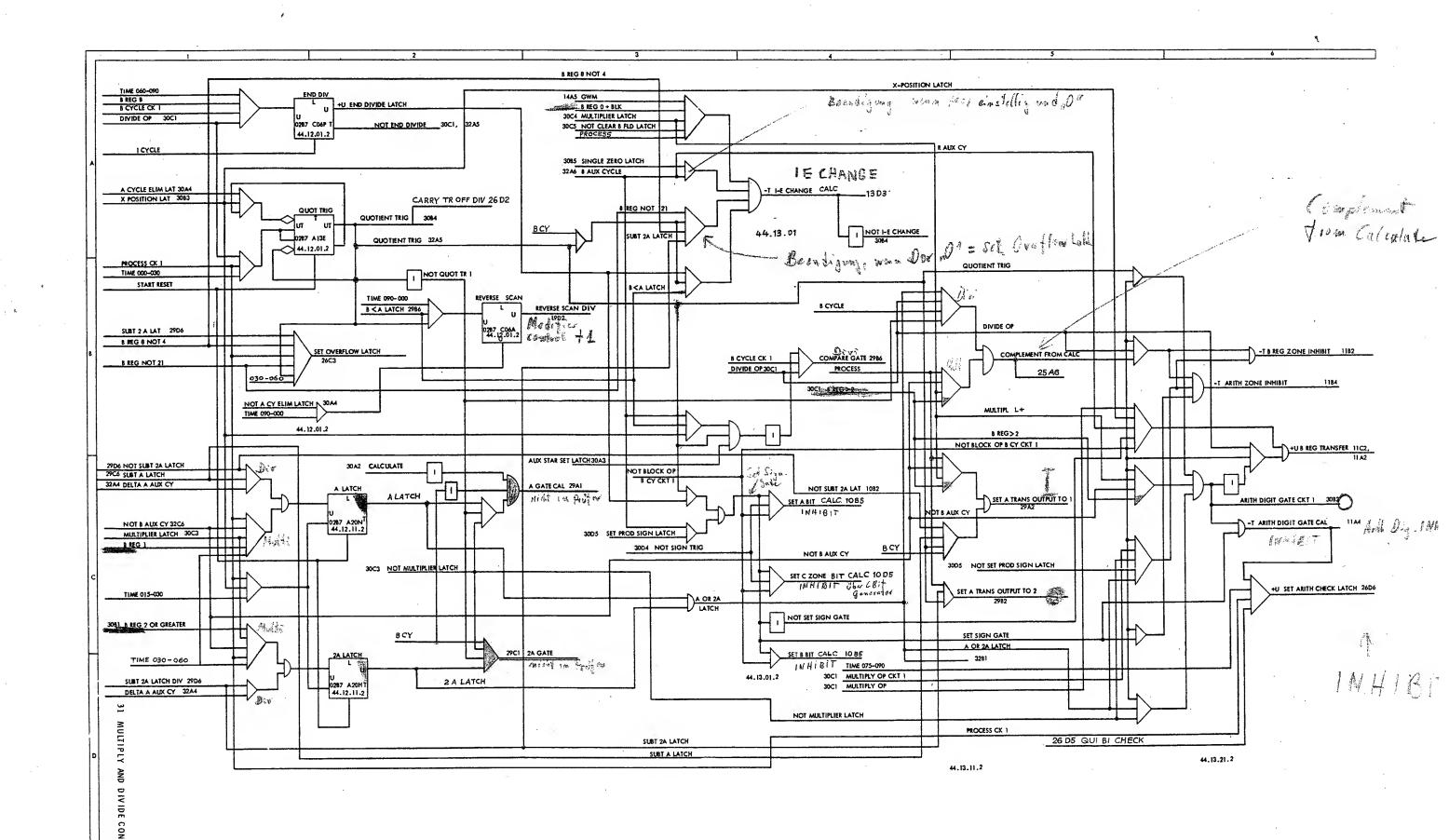


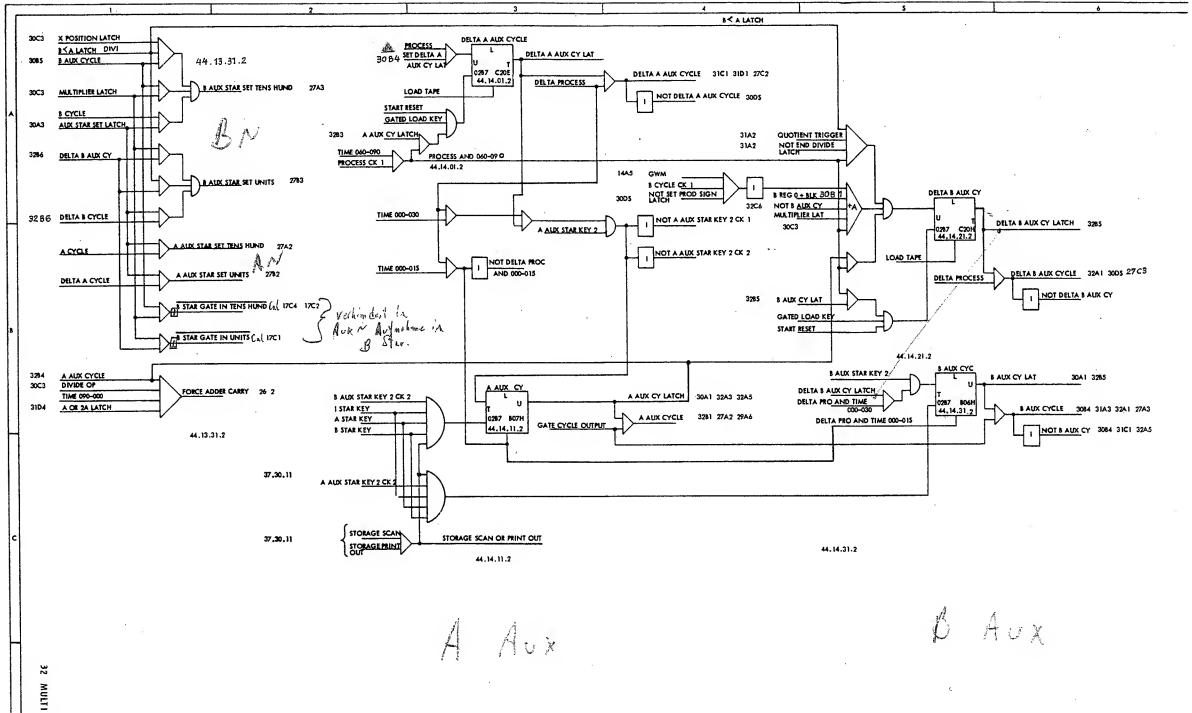




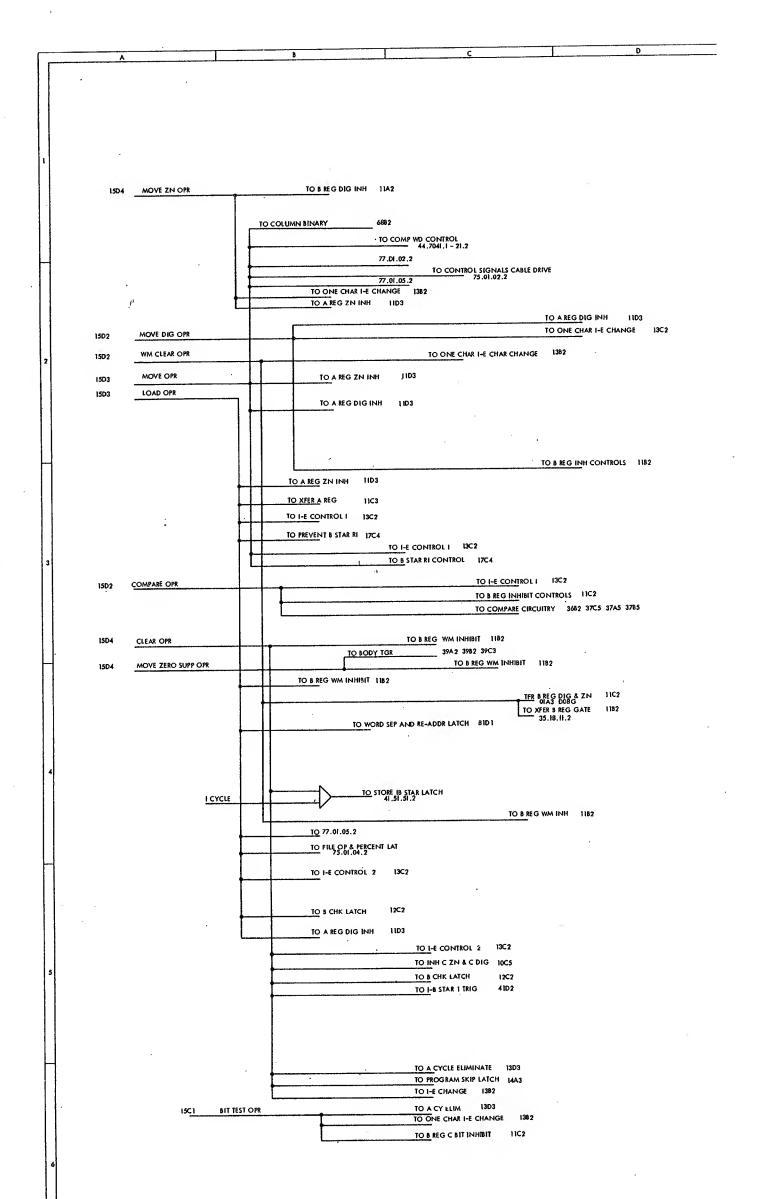


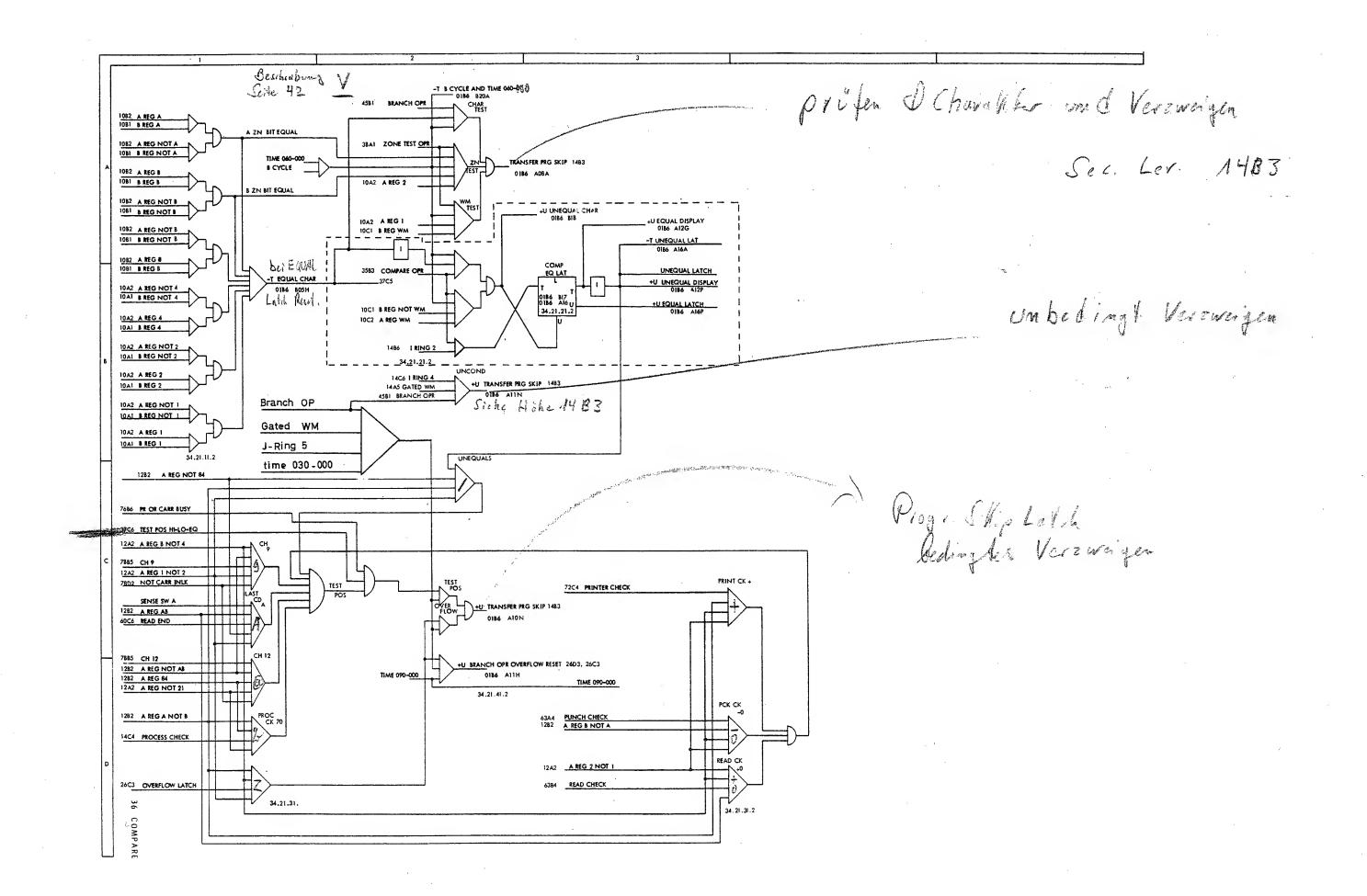


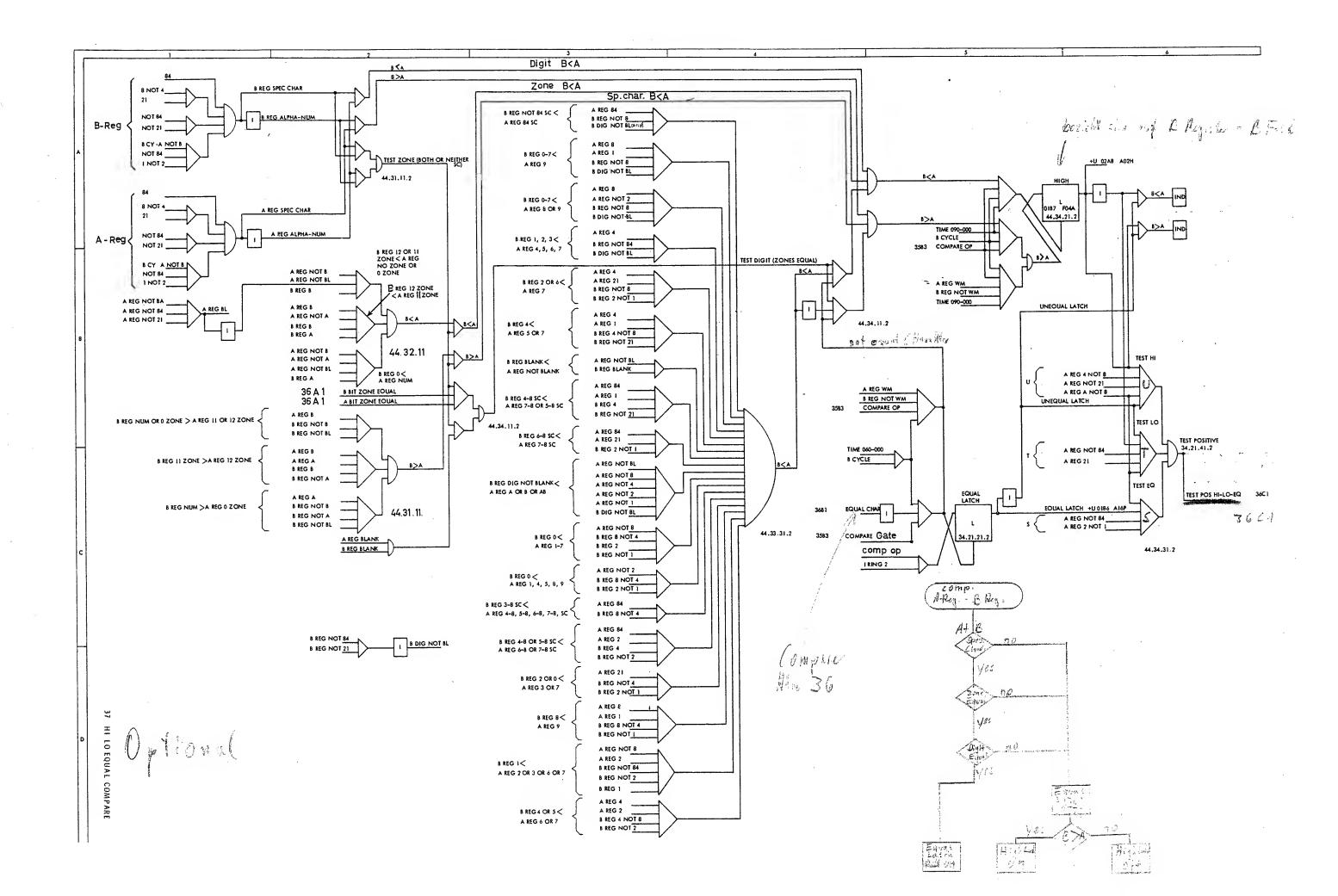


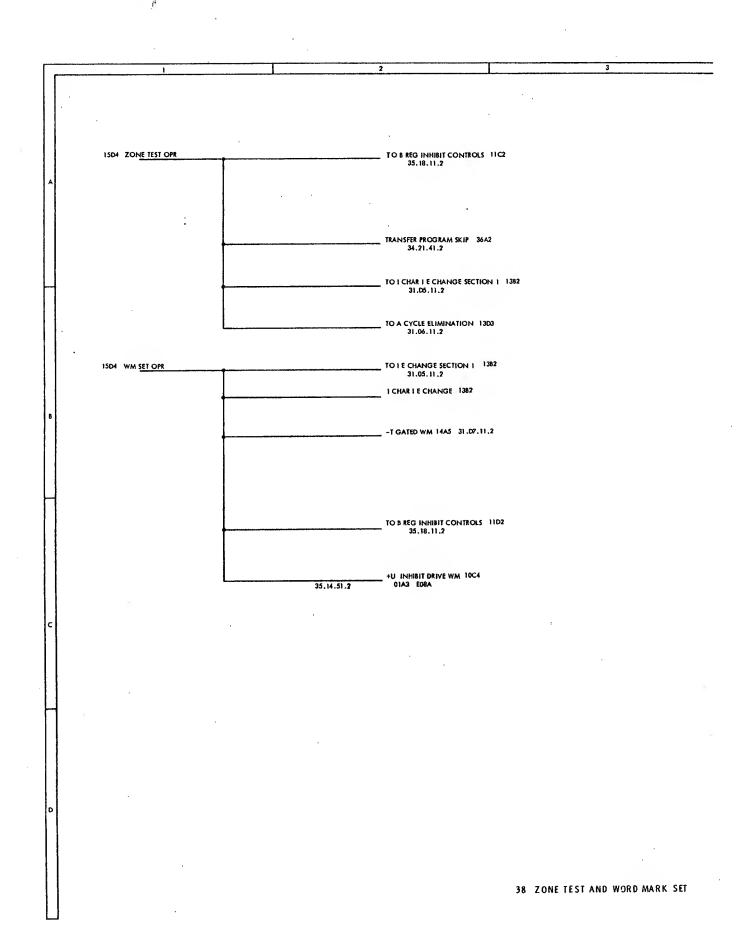


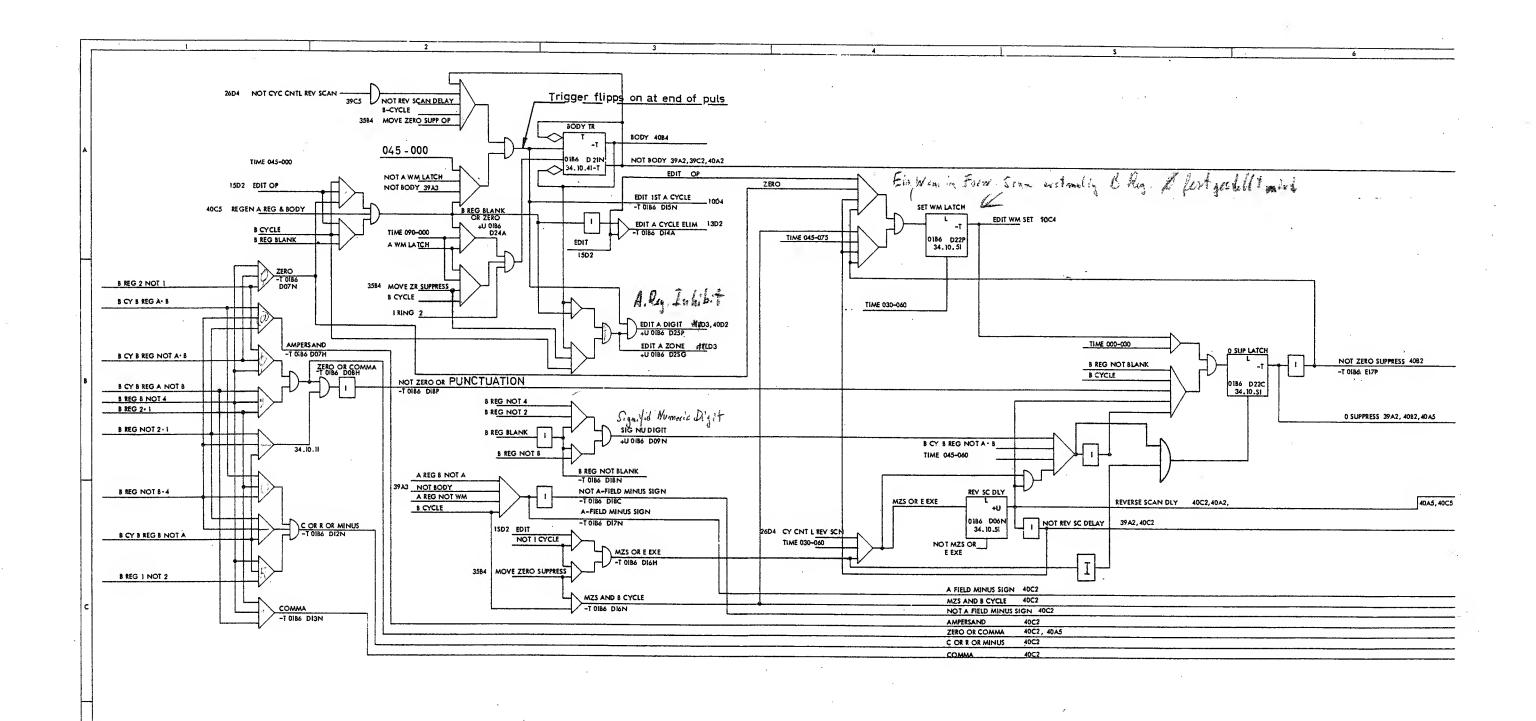
MULTIPLY AND DIVIDE CONT







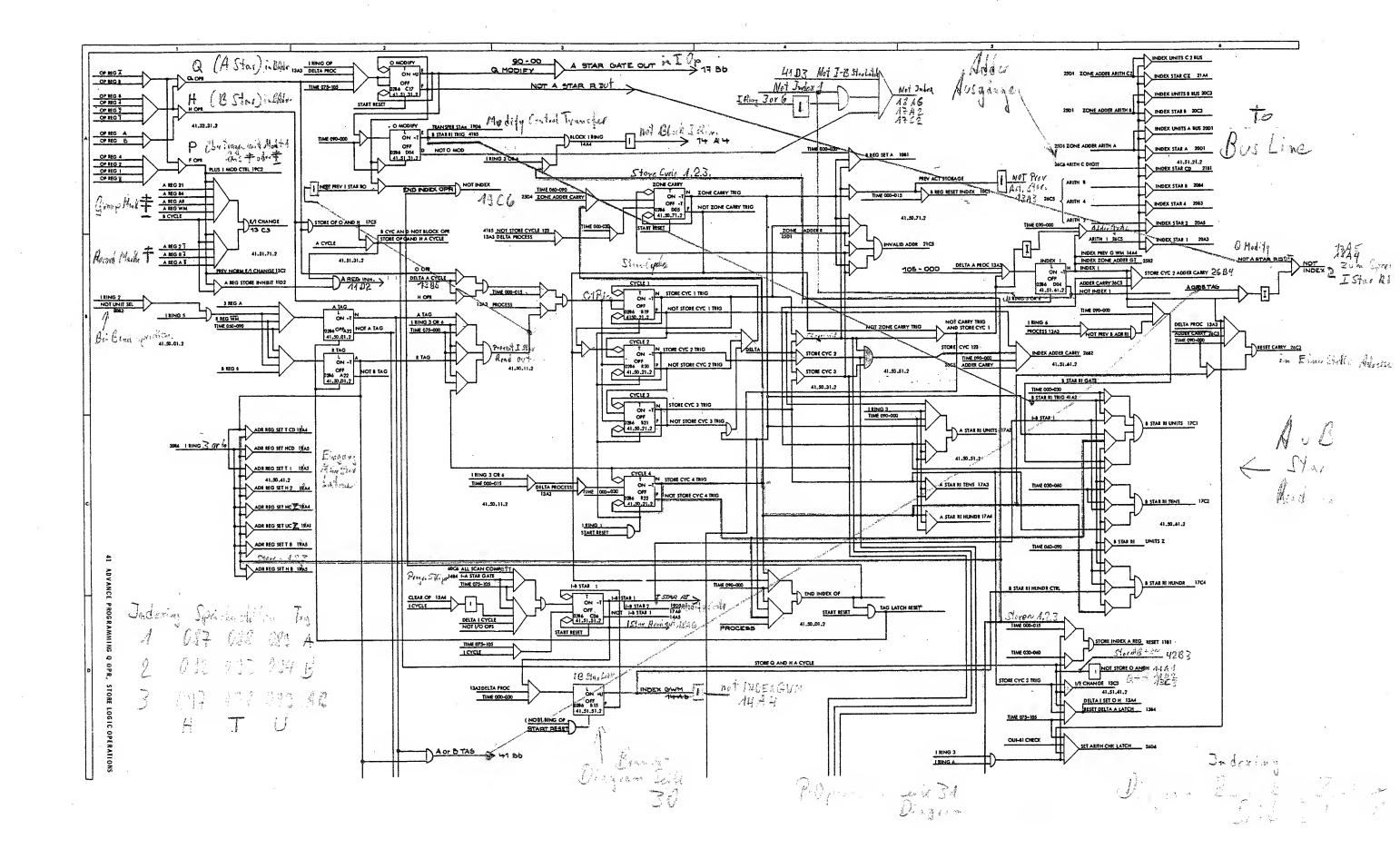


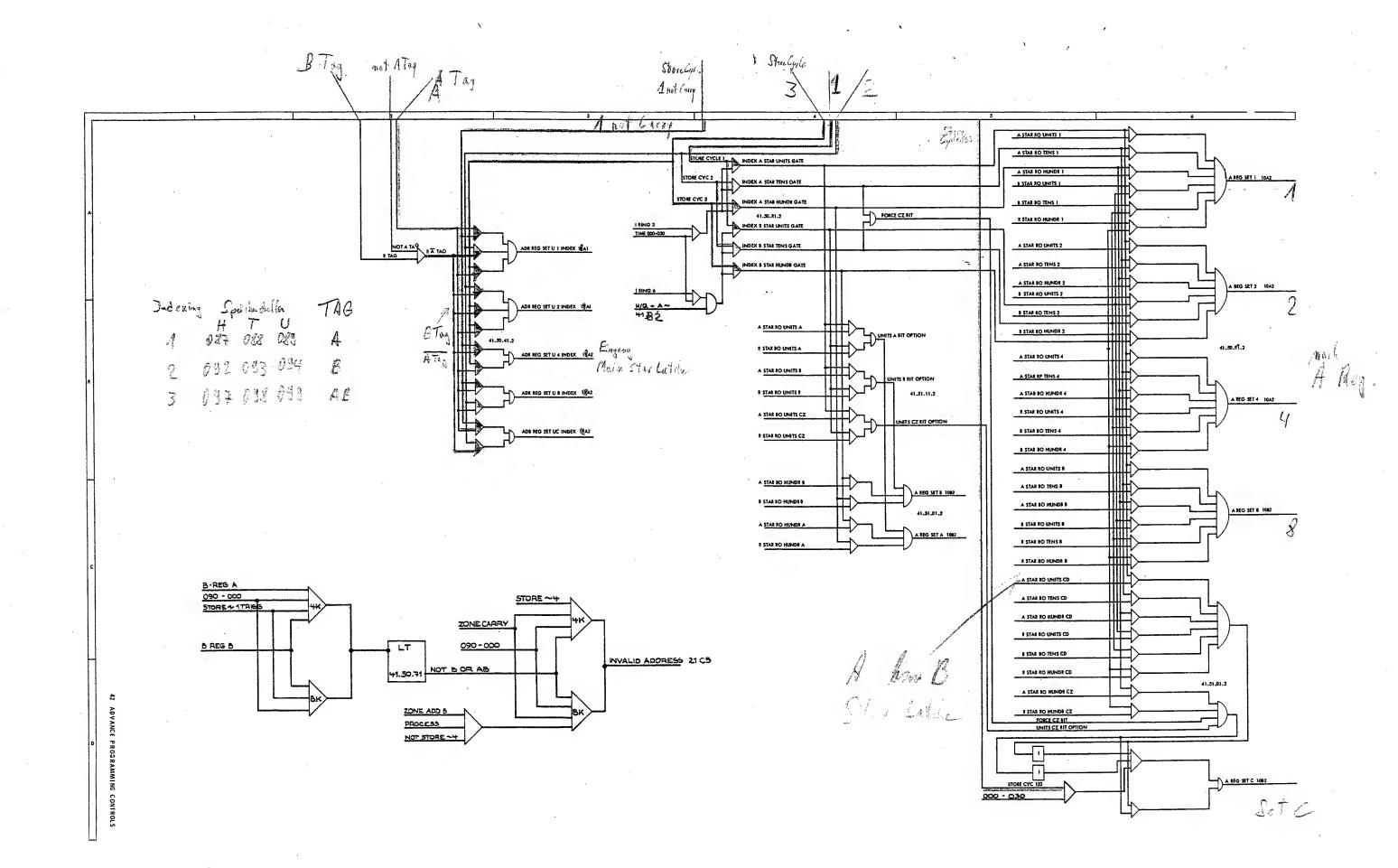


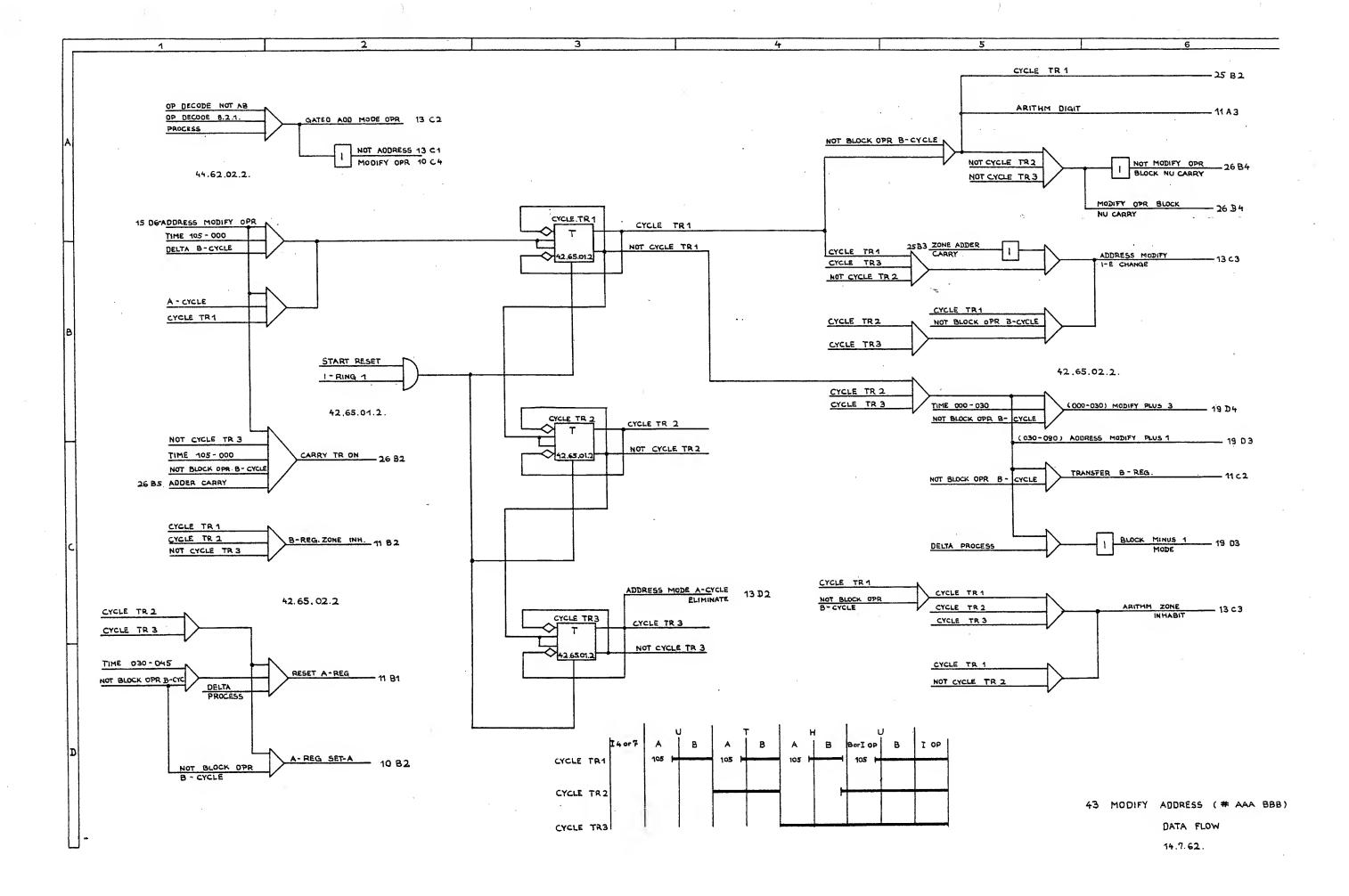
ED IT

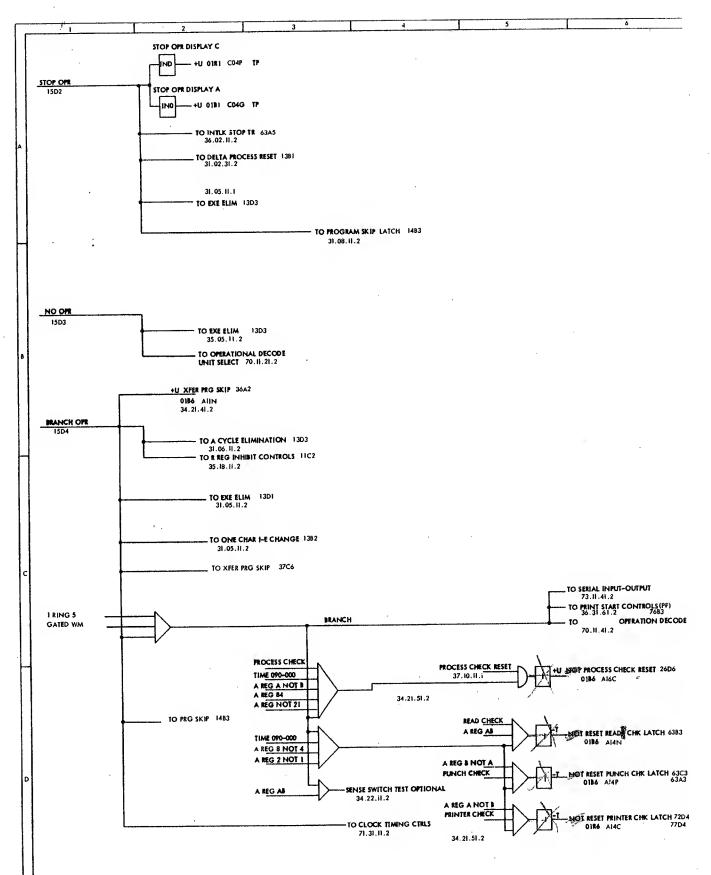
Silve Work Cheet

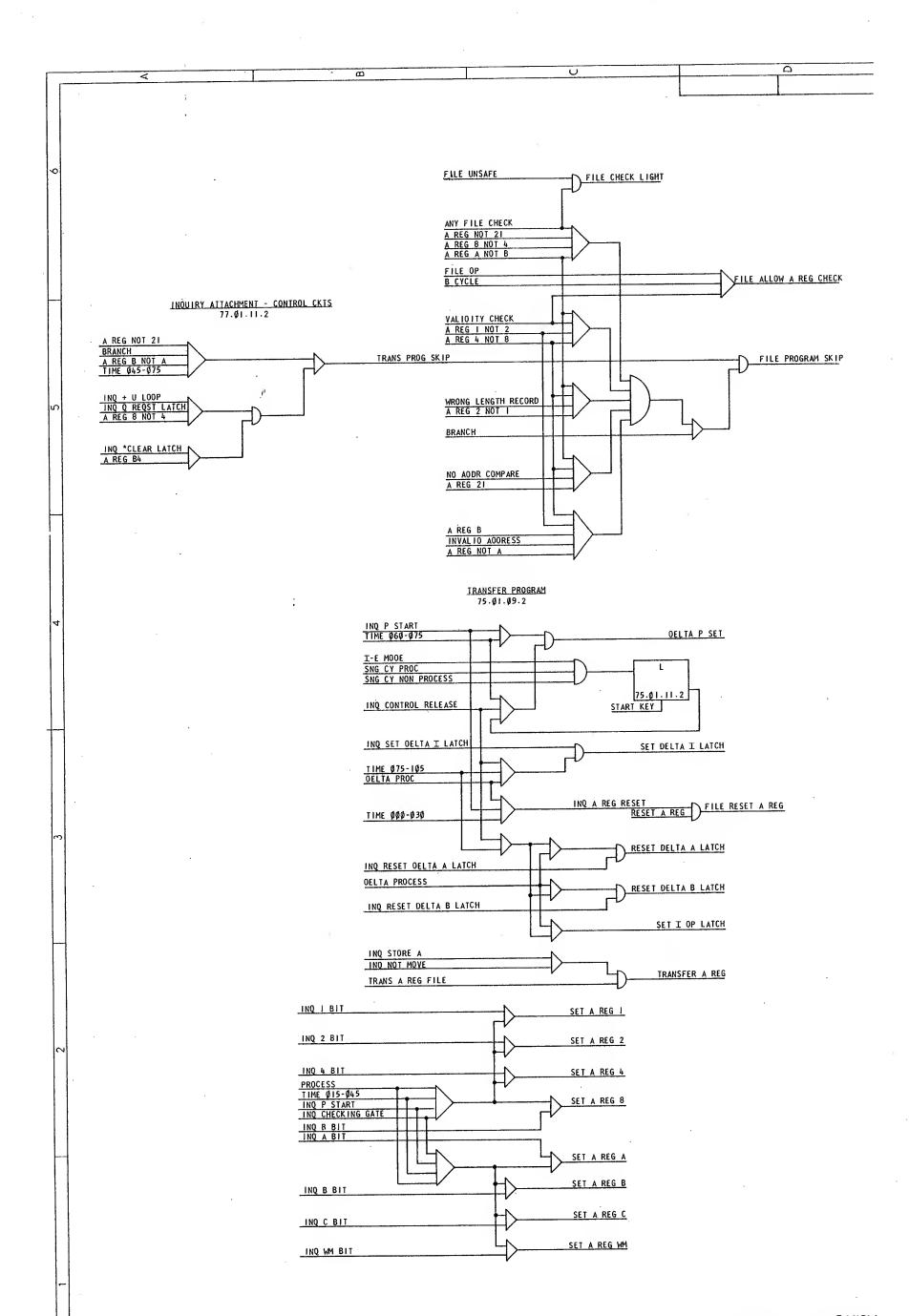
Beschodbung Seile 22
Zusate " " " 35

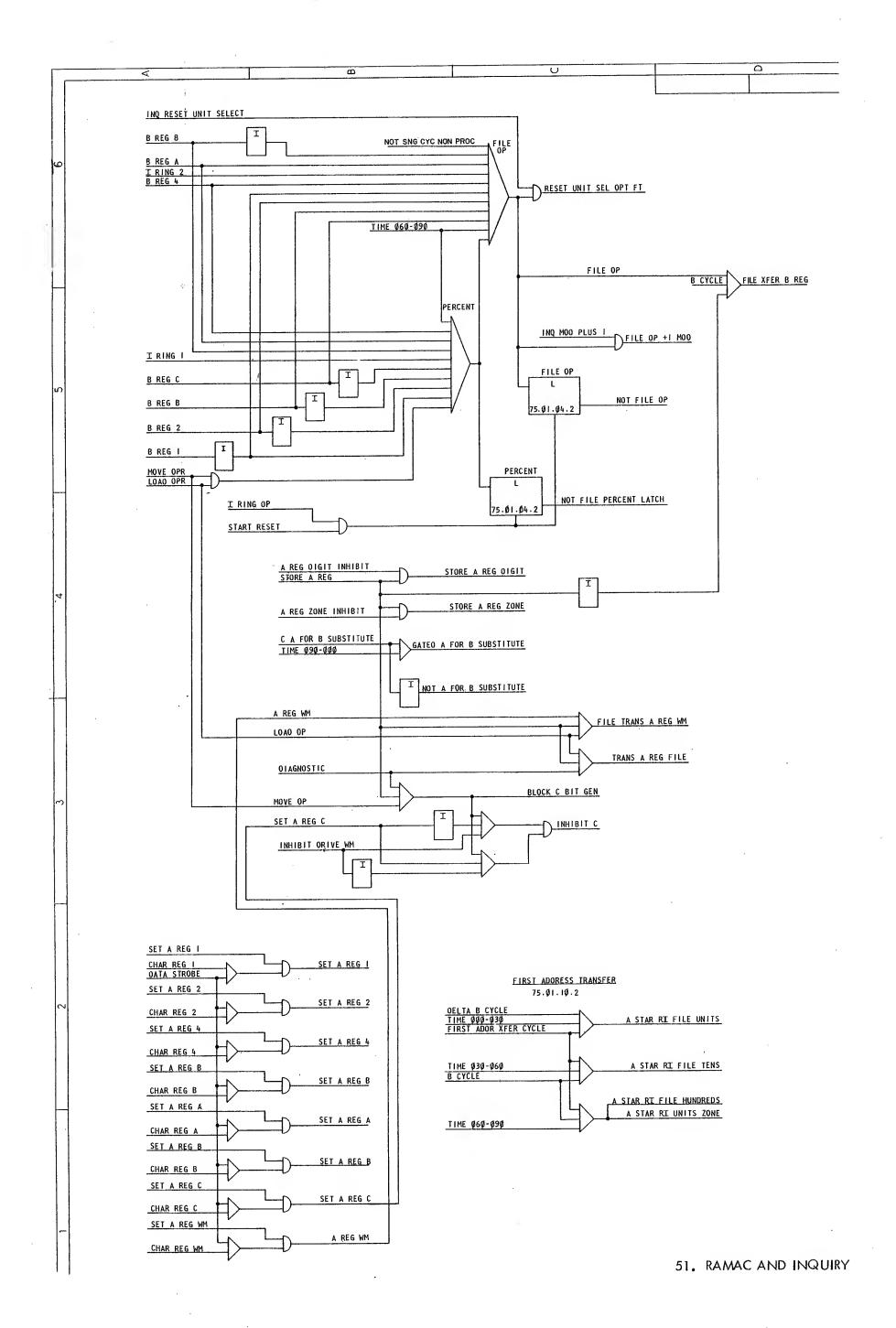


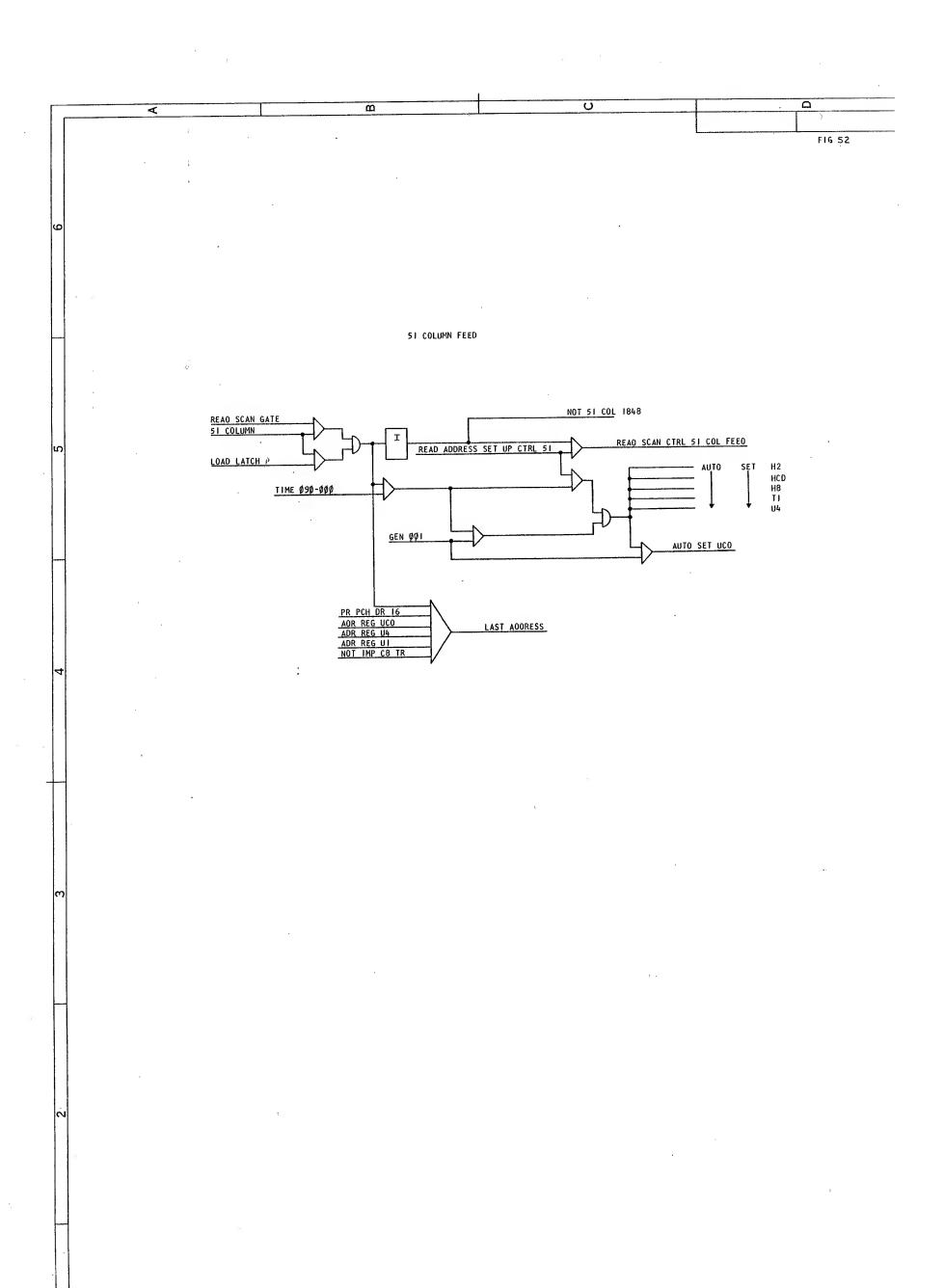


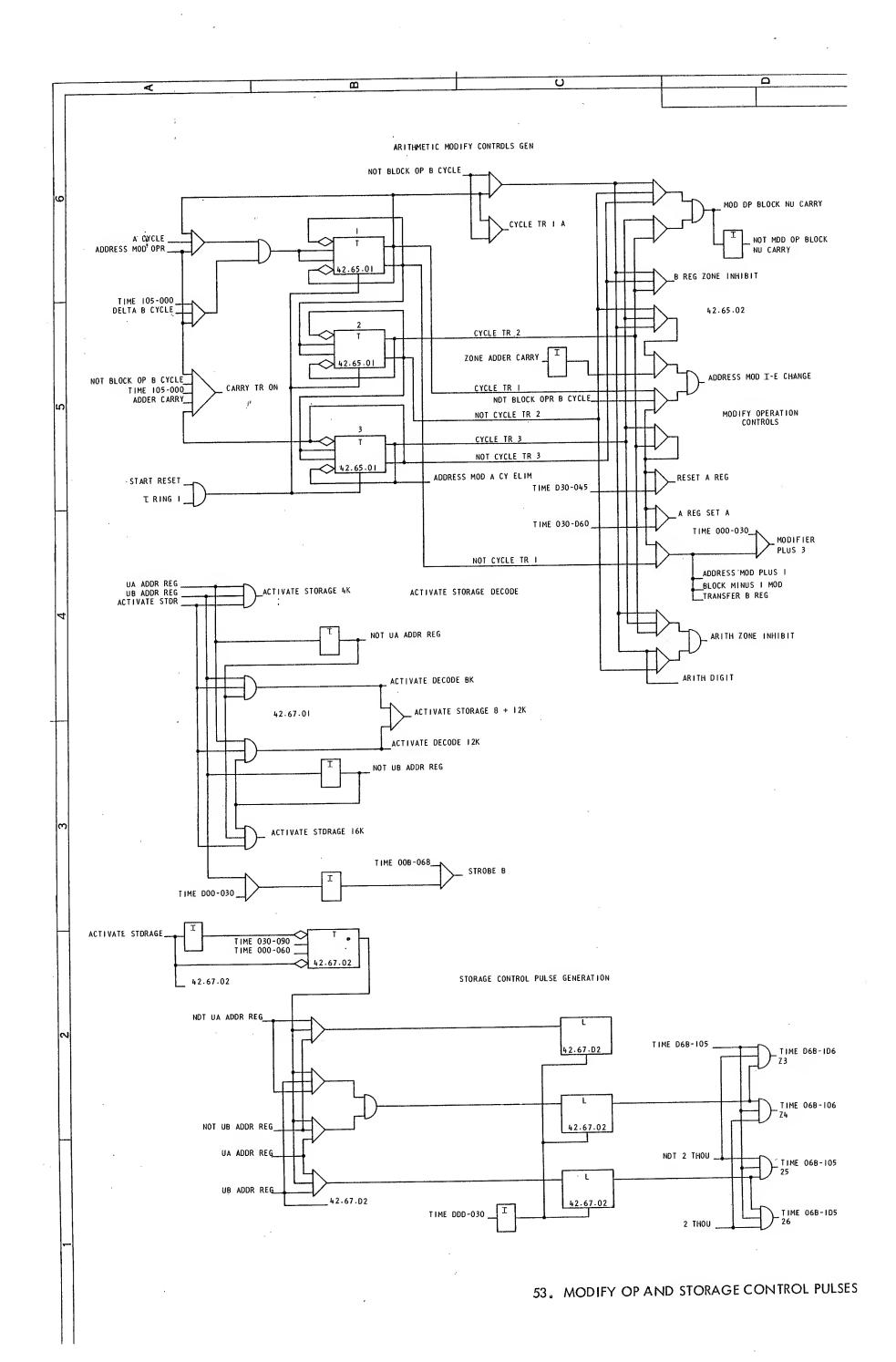


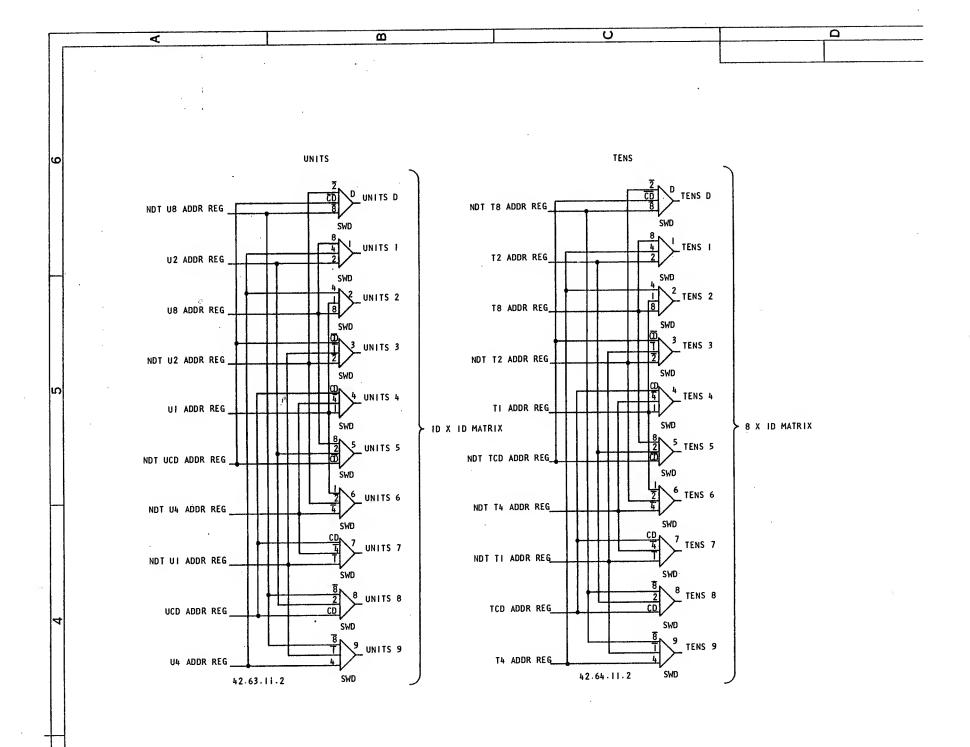


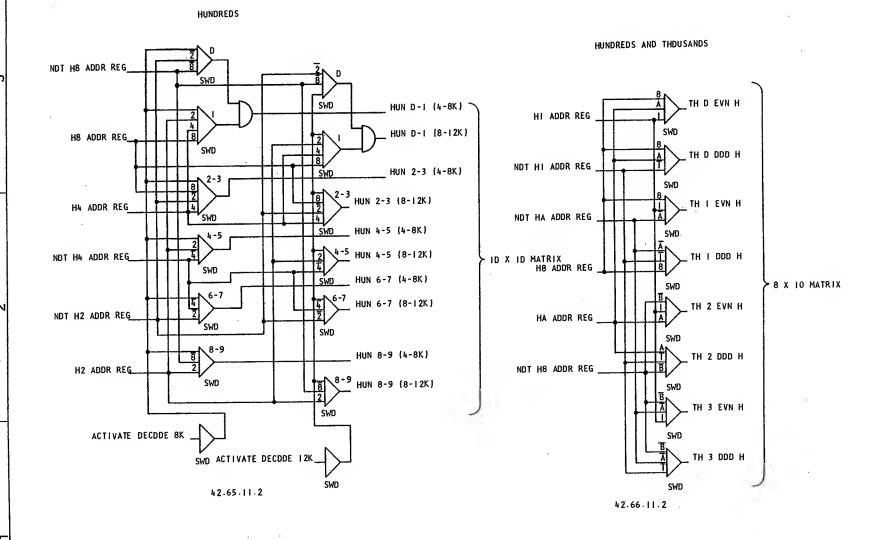


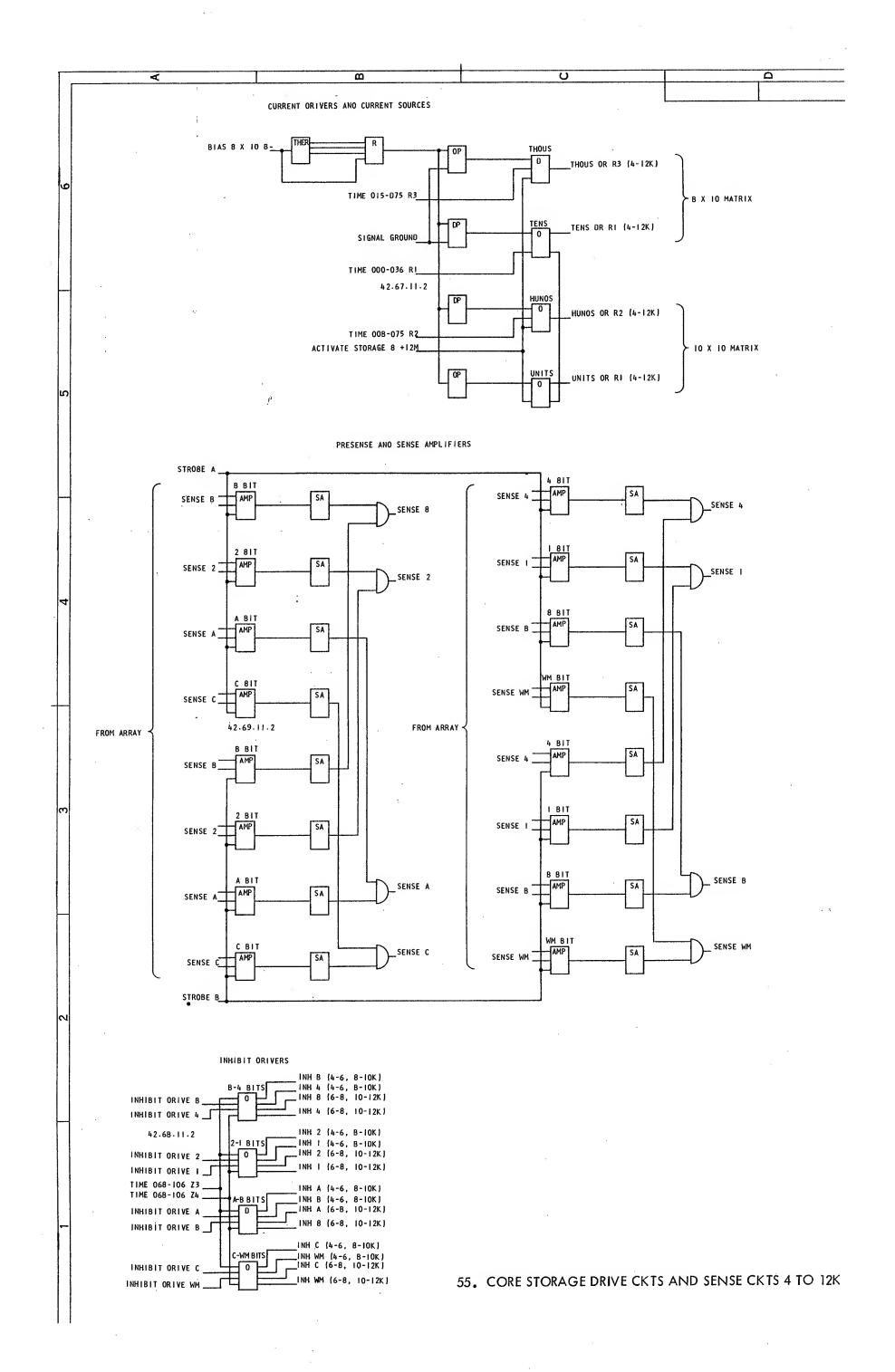


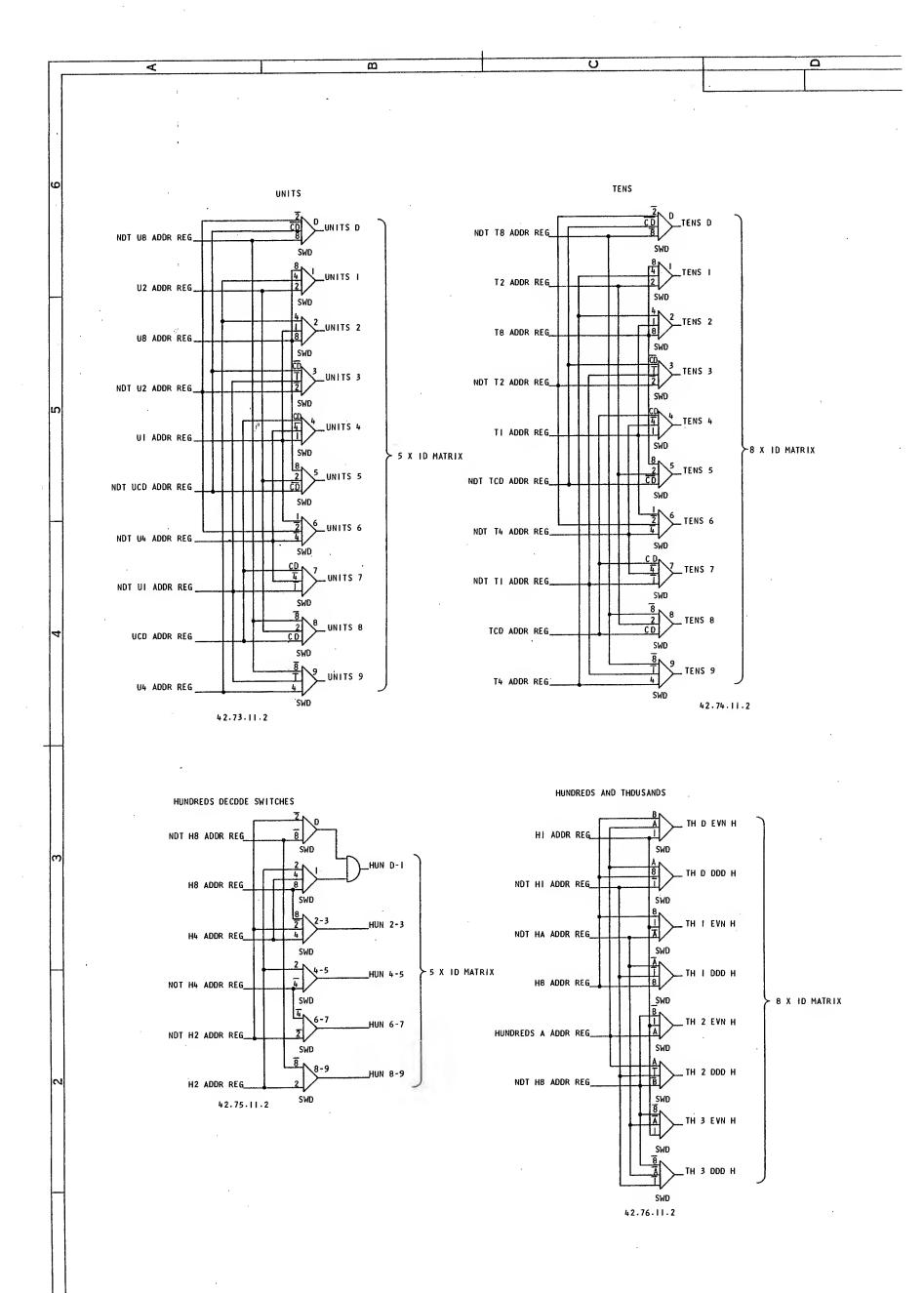


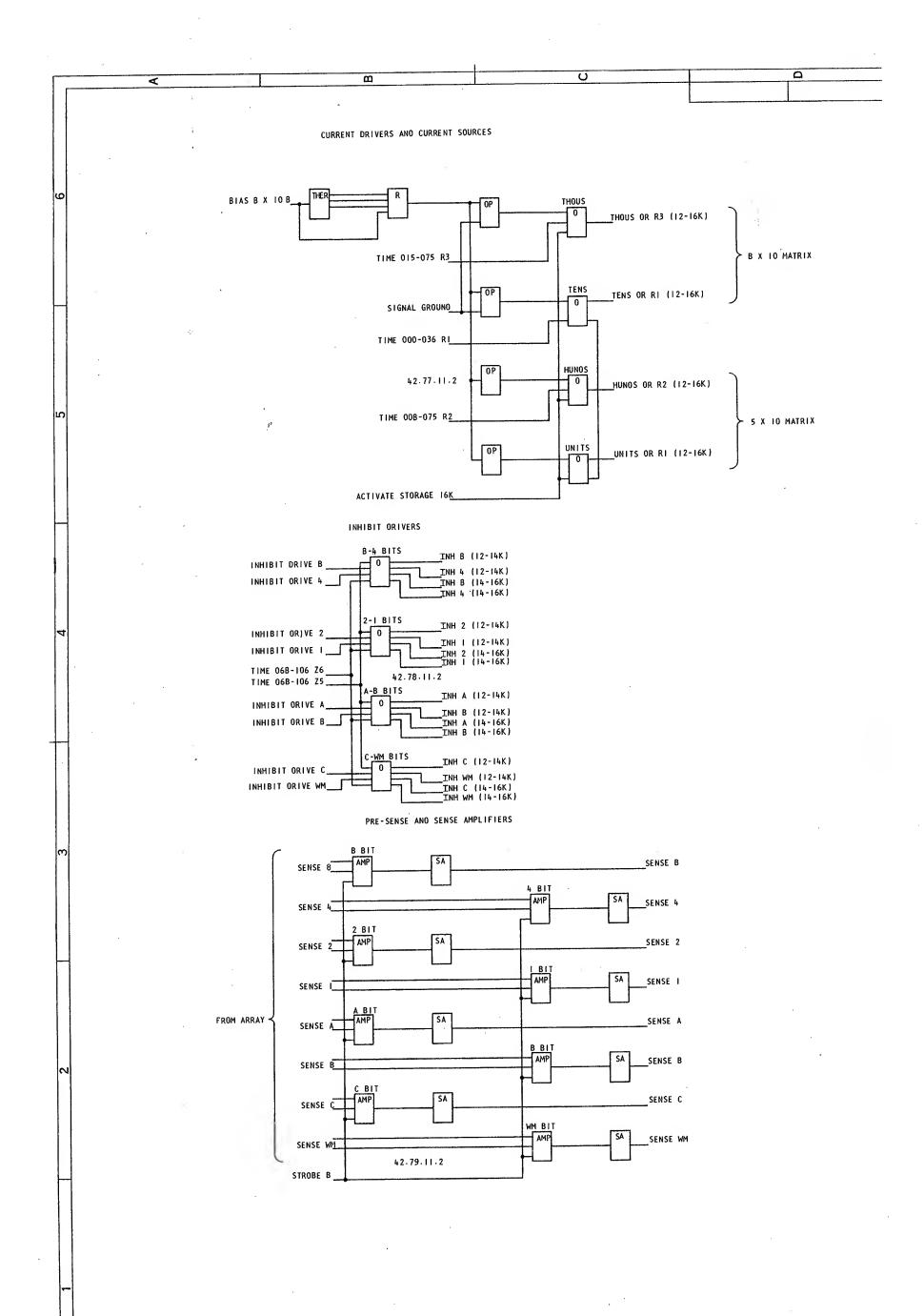


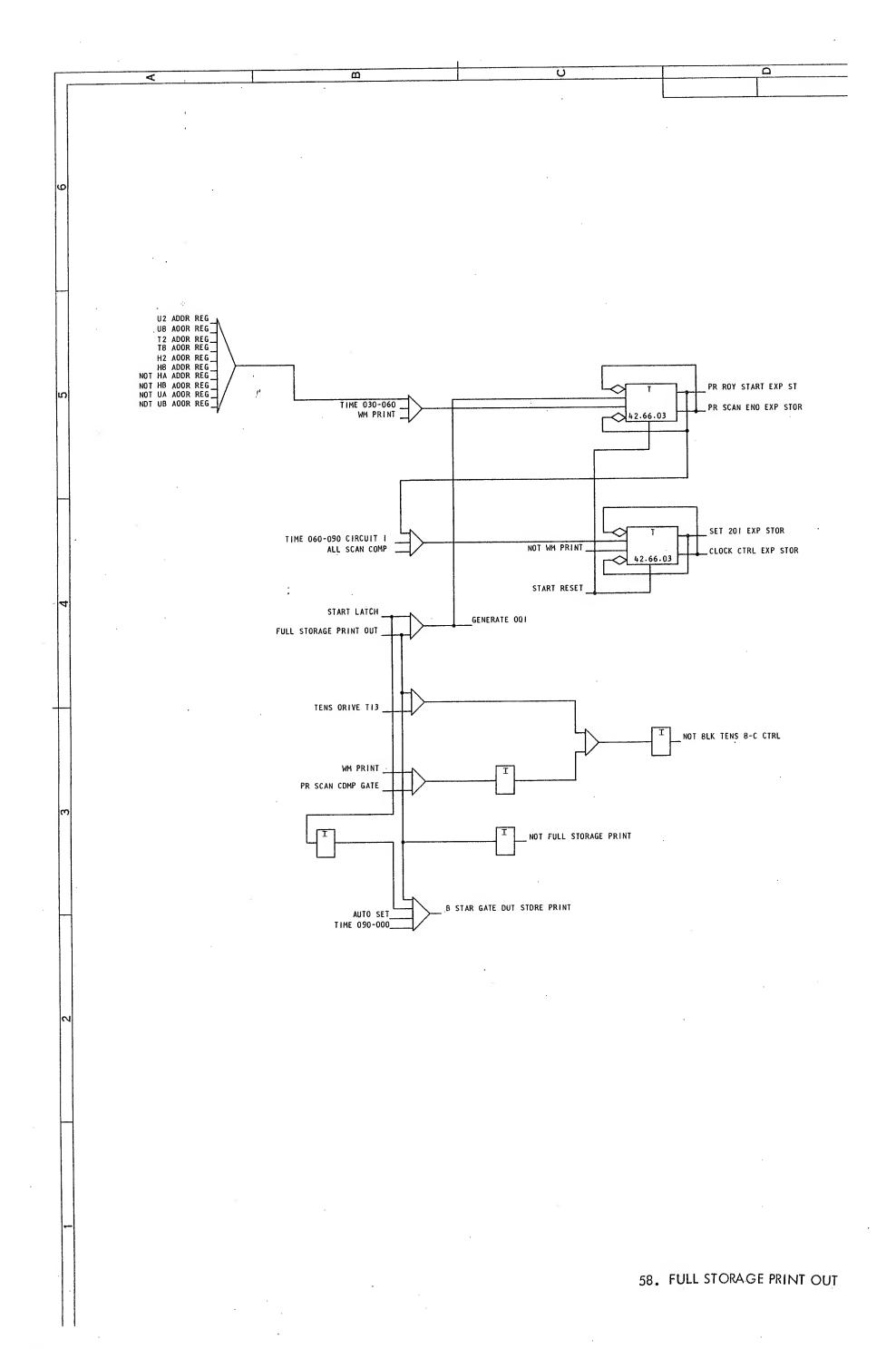






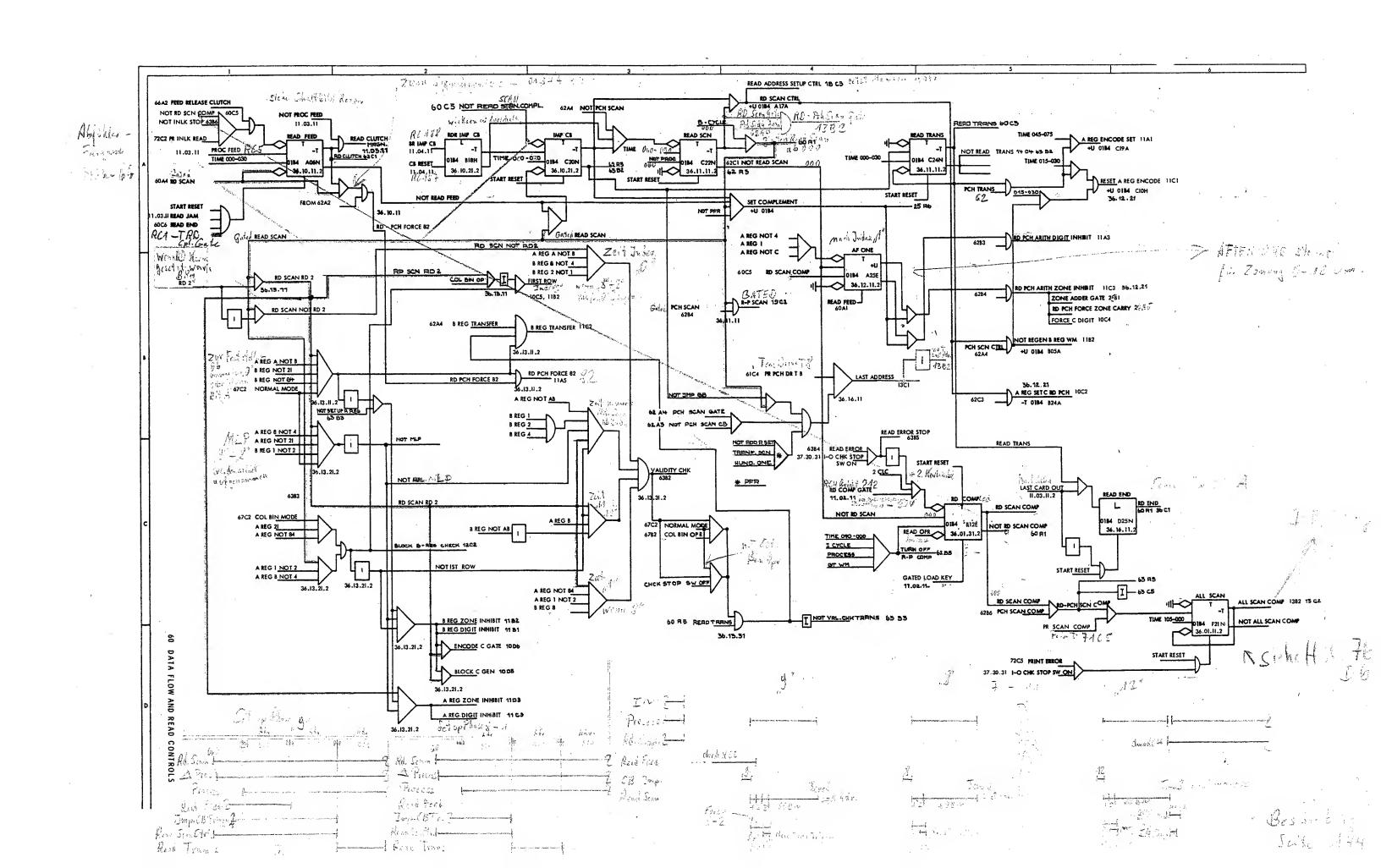


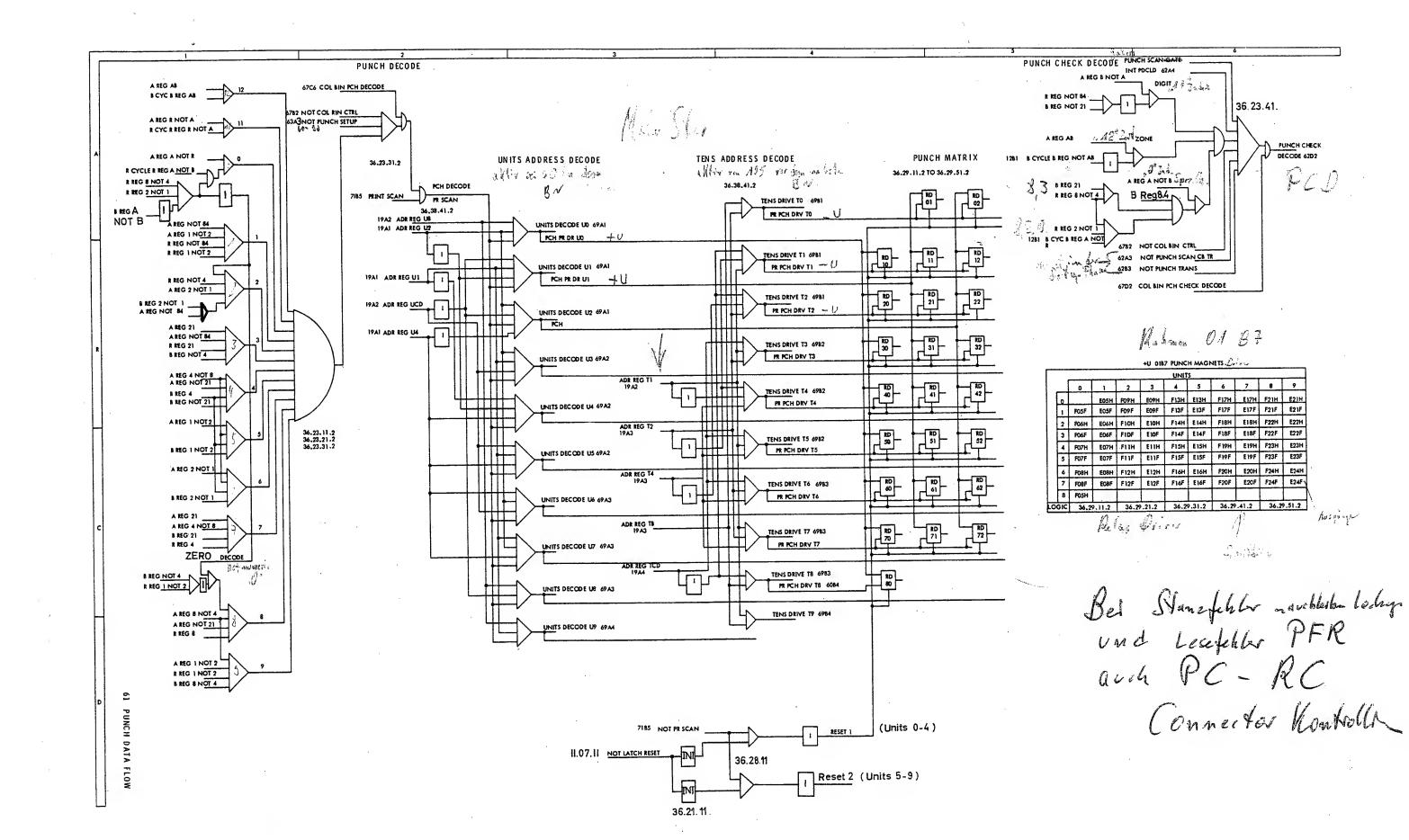




Lade taile:

Laderacke > Look Callak Op. Regide Rest of Set A (Rest Op) Read Scan Compl. - Aux 1875 9 Jet B-Latin und Read A A o I Latin AZ Set WM in 001 4404 Road WM in 902-020 4062 J. Set Manager to Sale 3) Rook Sion Compl. ord on 3 Zot Jung 40 2 1404 y Load Lath + Bes.

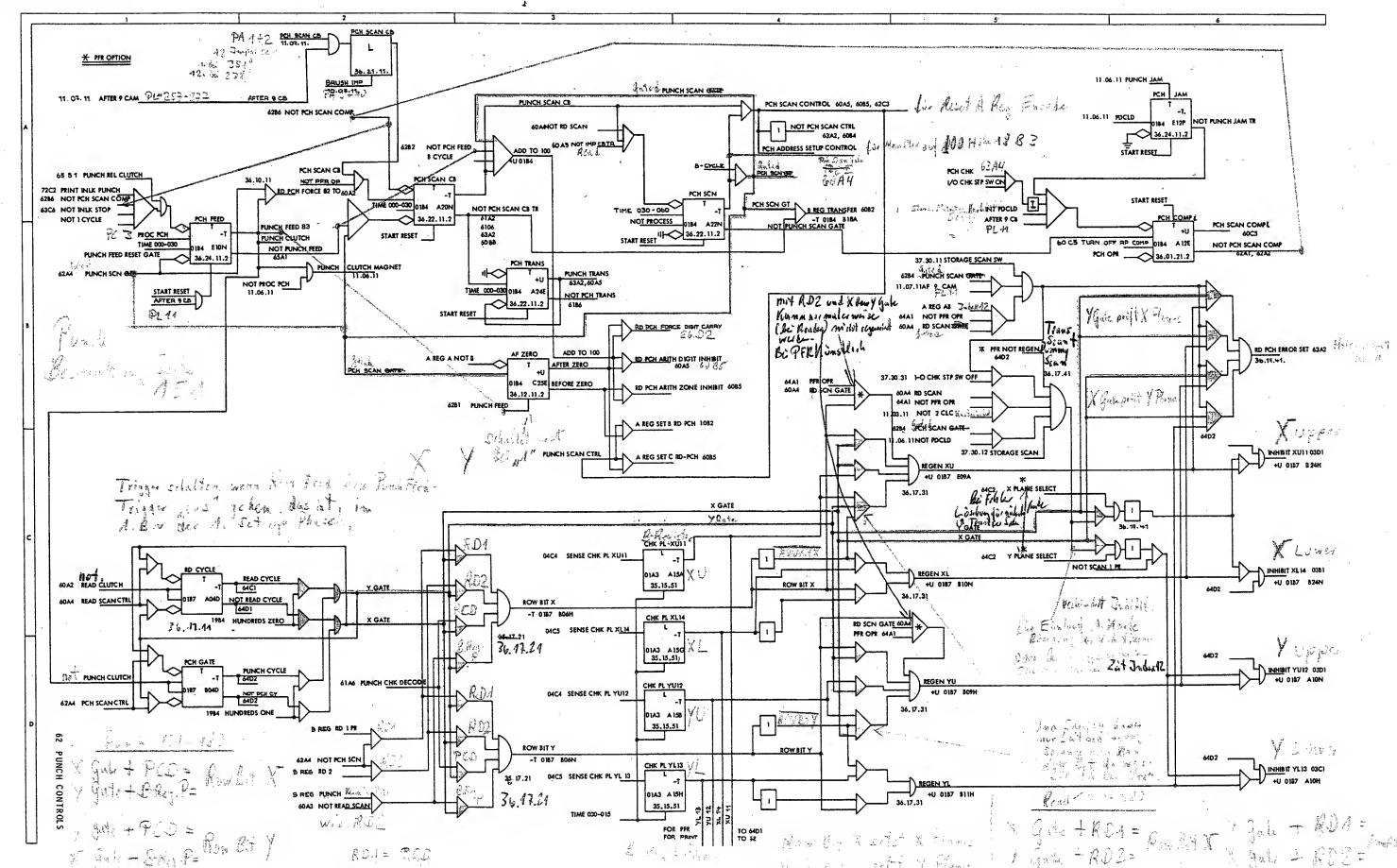




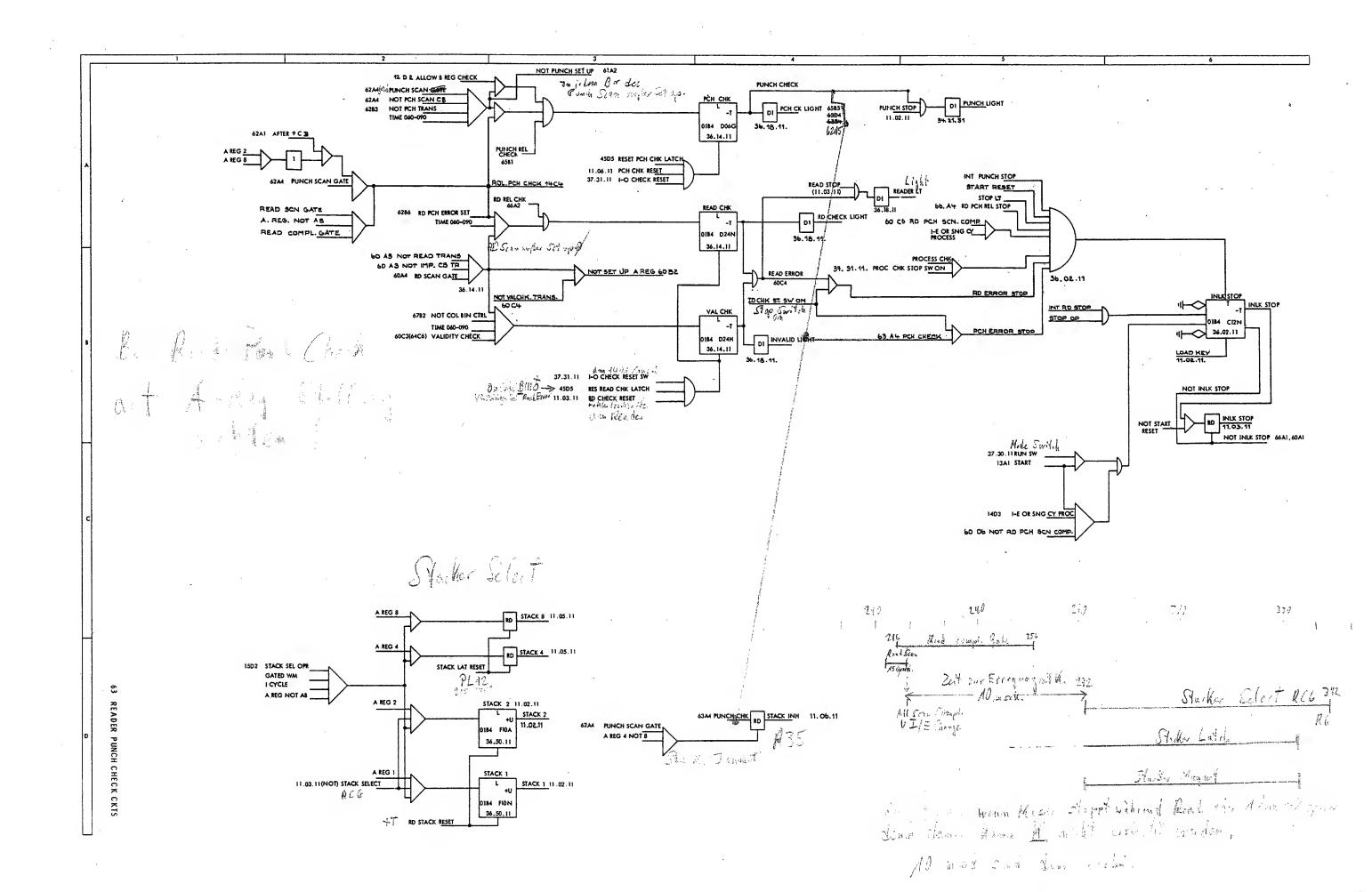
	**	- Ja	Hole i			
Rd Scan	Pund Scan		SEN June Span	Reg.P. In Clush B i z	Transfer Scan Cault immer much 13 Chillingt von 001-20 mach	101-130
Χ	X				Y Planes ->	y Planes
X	У	The state of the s	×		Y Plunes ->	X Planes
X	X		distribution.		Y Planes ->	Y Plunes
X	y	Transcatorio del care	The distribution of the second	acces.	Y Planes ->	X Planes
Read Sc Read Sc Ponch Sc	cun mit) an mit) un mit X	Y gale :	and PFRBi linary PFRBi li	est in y Plane est in X Plan est in X Plan	25 001-010 25 001-010 25 001-010	
Punch See Punch See Punch Sch	an mit X an mit Y wan mit Y	gale of gale or	nd P.C.D. lind P.C.D. lind P.C.D. lind P.C.D. lind P.C.B. lind	est in Y Planest in X Plan	nes 104-180 nes 104-180	
In der	Stunz stu	dion	PFK TPC	ルートに	DVI	T 1 C
Falls du Xuder Y Michts au	onh Fehle Scleet A die Ja	v im 13 (6205) Libit le	3. Scan moch dufor, dufon kom	regeneriest von den amen Kan	wird spryt im B. Rey. Check L a.	trunsfer Jeun en tihen

				•	
Kartemiannya G	V. here	202 200 0	RDA A.B.C		Mgan= 1 2 3 4
O TOTAL AND A					XU 1 0 1 0 1 0 XL 3 0 1 0 1 0
8,3" 12"	2			\$ \$:	YU 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1
	3	6	£	The second secon	X Gale + RD1 = Row B:+ X Y gale + RD2 =
	4		6 RD1	Provincesky	Y gate + RD1 = Row Bit y X gate + RD2 = Row Bit y
	,	4.			ROW Bit X sotet X Planes ROW Bit Y sotet Y Planes

Upper 1X La für jede Lochung



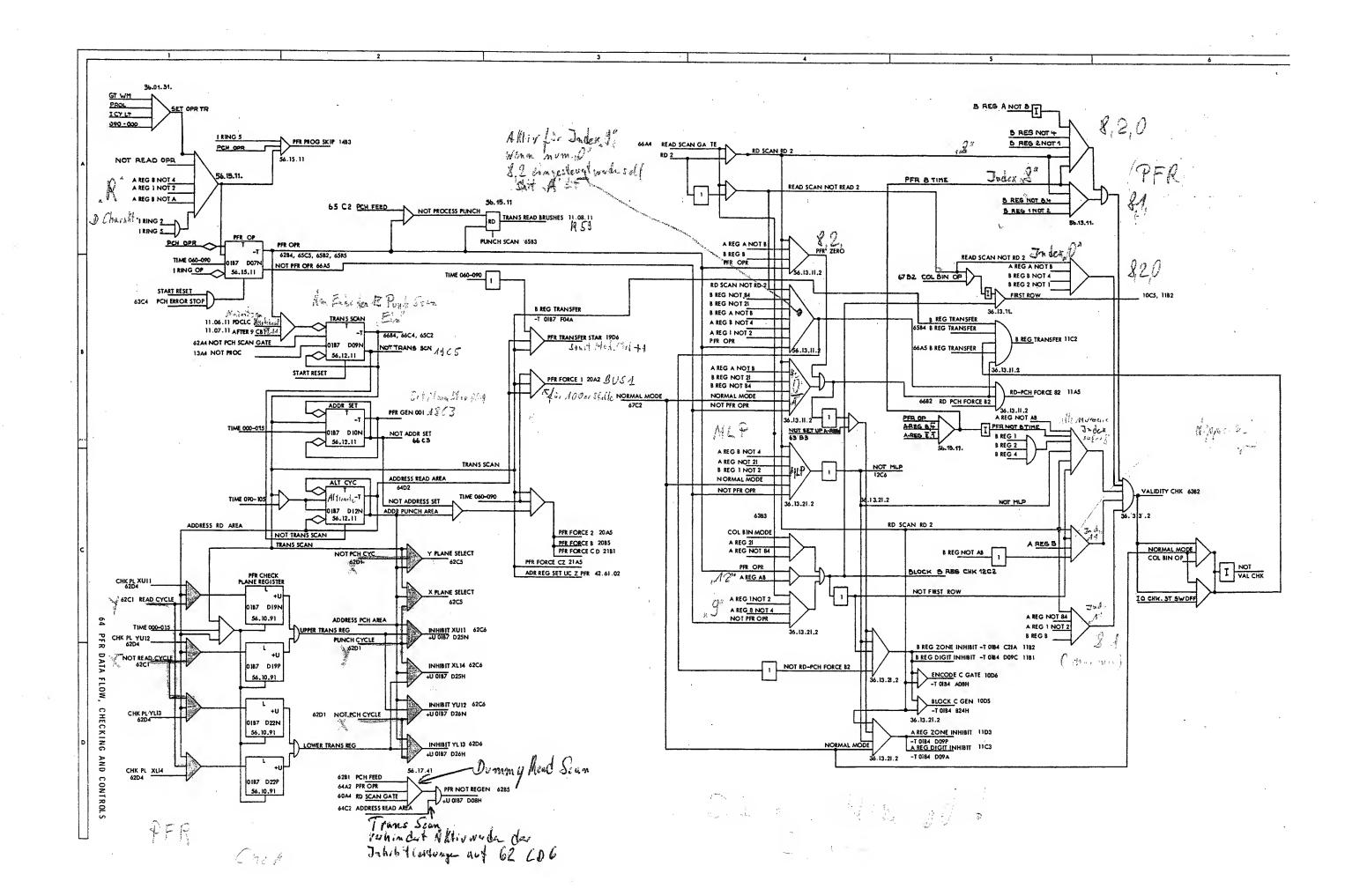
.

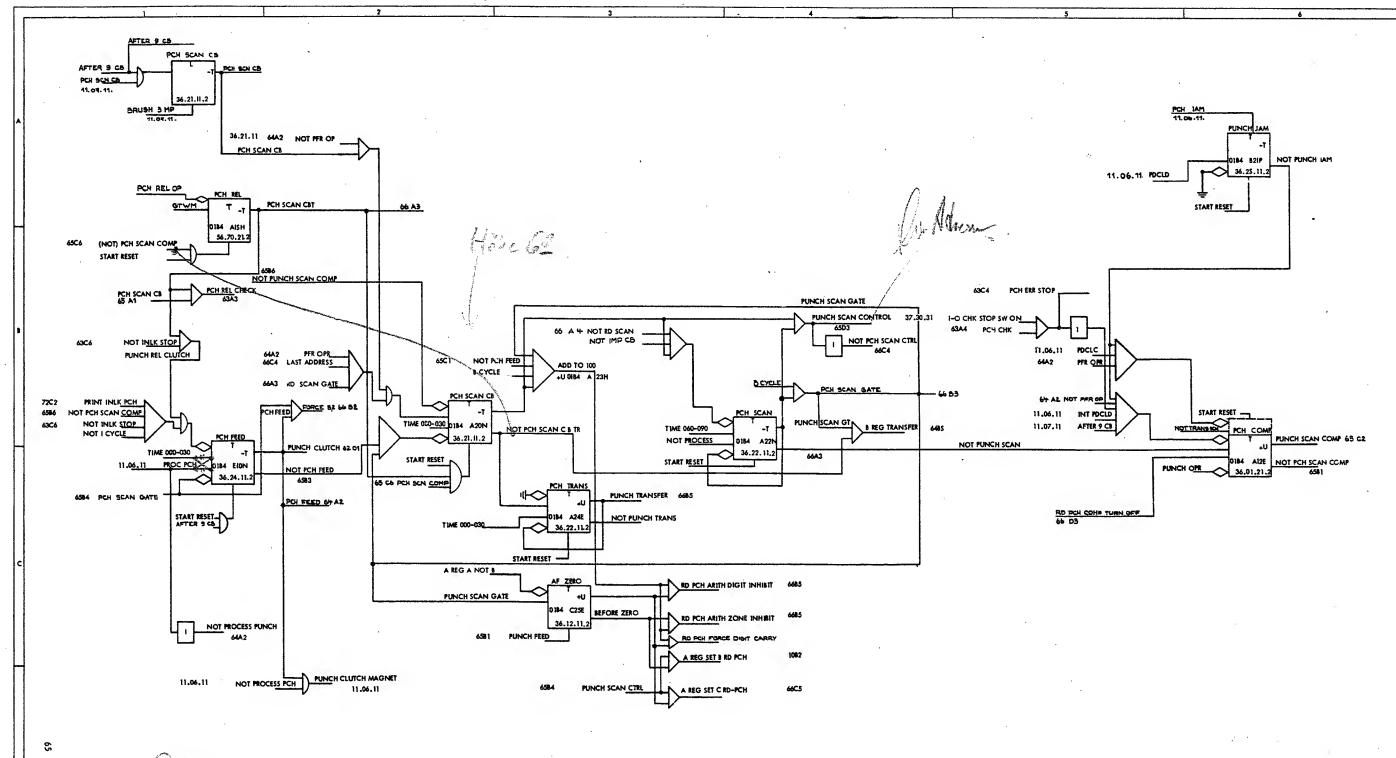


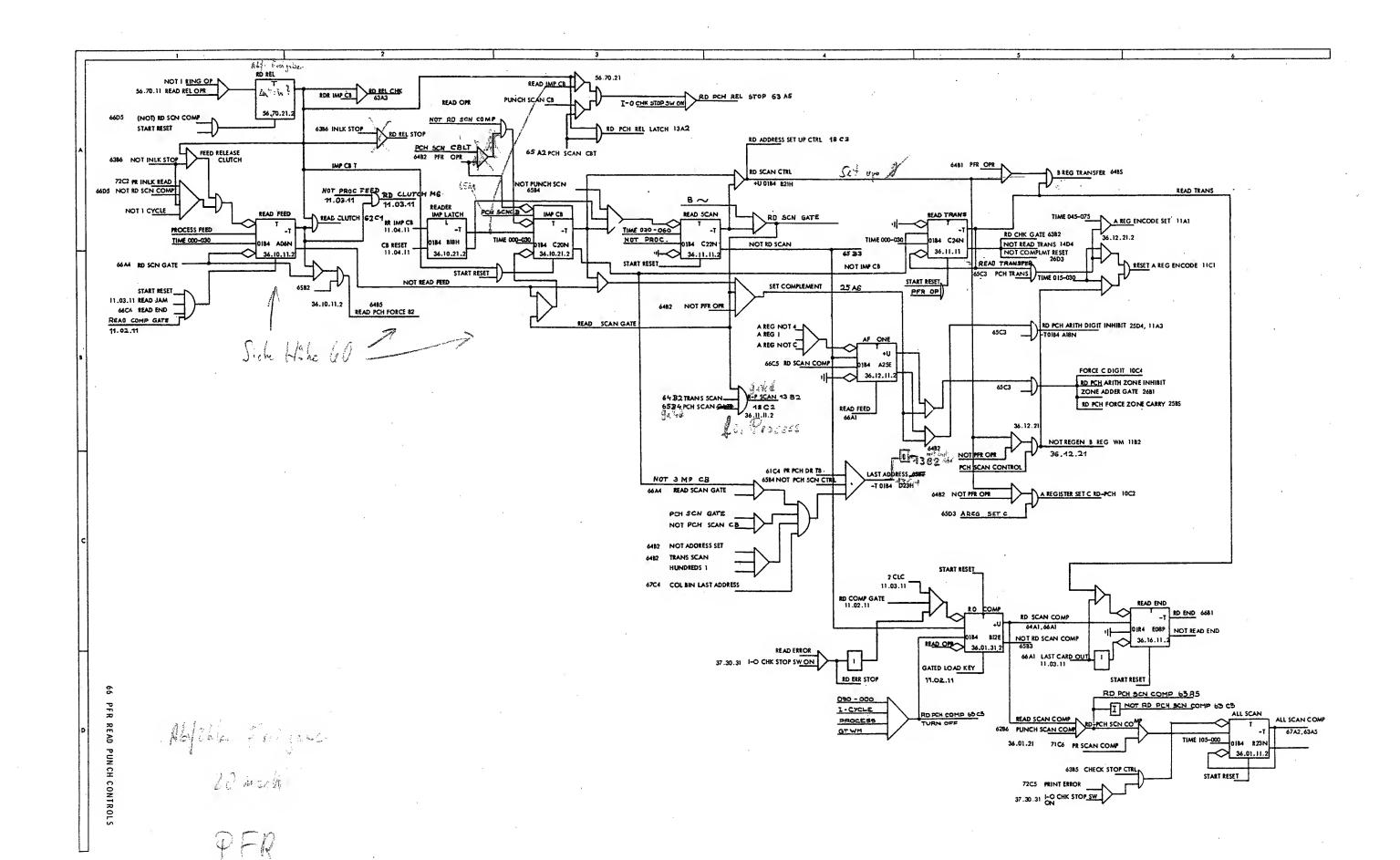
	litetu B = des	الله الله الله الله الله الله الله الله	Tra	ns fer	(CUN.									
	13 Punto Sean		B	\mathcal{B}_{-}	\mathcal{B}	\mathcal{B}_{\perp}	\mathcal{B}_{-}	B	<i>B</i>	B	\mathcal{B}_{-}	B	`	100.	
Main Star	180			The same of		102	Action Commences of the	-	> _	199	080	180			*
B. Stur	181		101	002	102	003	103	-		080	180				
B Delta Process	2	1					-	Marie Control			angenerator.		1-		
											4		.,		Sea report
6664 Lust Adress				<u>.</u>							1				
65B 4 Pch Scan Trigg	er E														_
4 BA Trans Scan Tr	3	majarki ocznie do dz	entro de finito recele	n zyskinak i katago	y was 11	t state and the set	and the first of	1 Inc. 1 197 (1985	g vagen gan da ta sa genera	to a special de de la special de de la special de de la special de de la special de la special de de la special de	Andrews Control Control				
16 84 D-Ph Sc. Gate	1	**************************************				And the second section of the section of the second section of the section of the second section of the section of th	(1007)* 10 79								
4B2 Adr. Set Tr. Gen.	001	a properties and the												ļ	
or C2 Alter Cycle Trie		A	dr. Rend	ą d	de Reid	A	n fire		mate 21	**	En.	}-			0.0
94 B3 PFR Transf. Star. No	Modil.	<u> </u>	1	+		į.			A SEED OF THE PROPERTY OF	F		j			
			}		فسيدر		1_2								
483 PFR Force Human	82,0					} {				-		H	as year Community		
566 Punh Compl. Tr			Carried MANAGEMENT					THE REAL PROPERTY OF THE PERSON OF THE PERSO						41	
26 DG ALL Compl. T	1.									W) Land		The state of the s			-
13 Della I Luto	,								-			04 THE	- A	=	
	h	-		-						<u> </u>	THE PROPERTY OF THE PROPERTY O		1		-
In Latch		+	1-				+-	 	+	+	+	-	<u> </u>		-

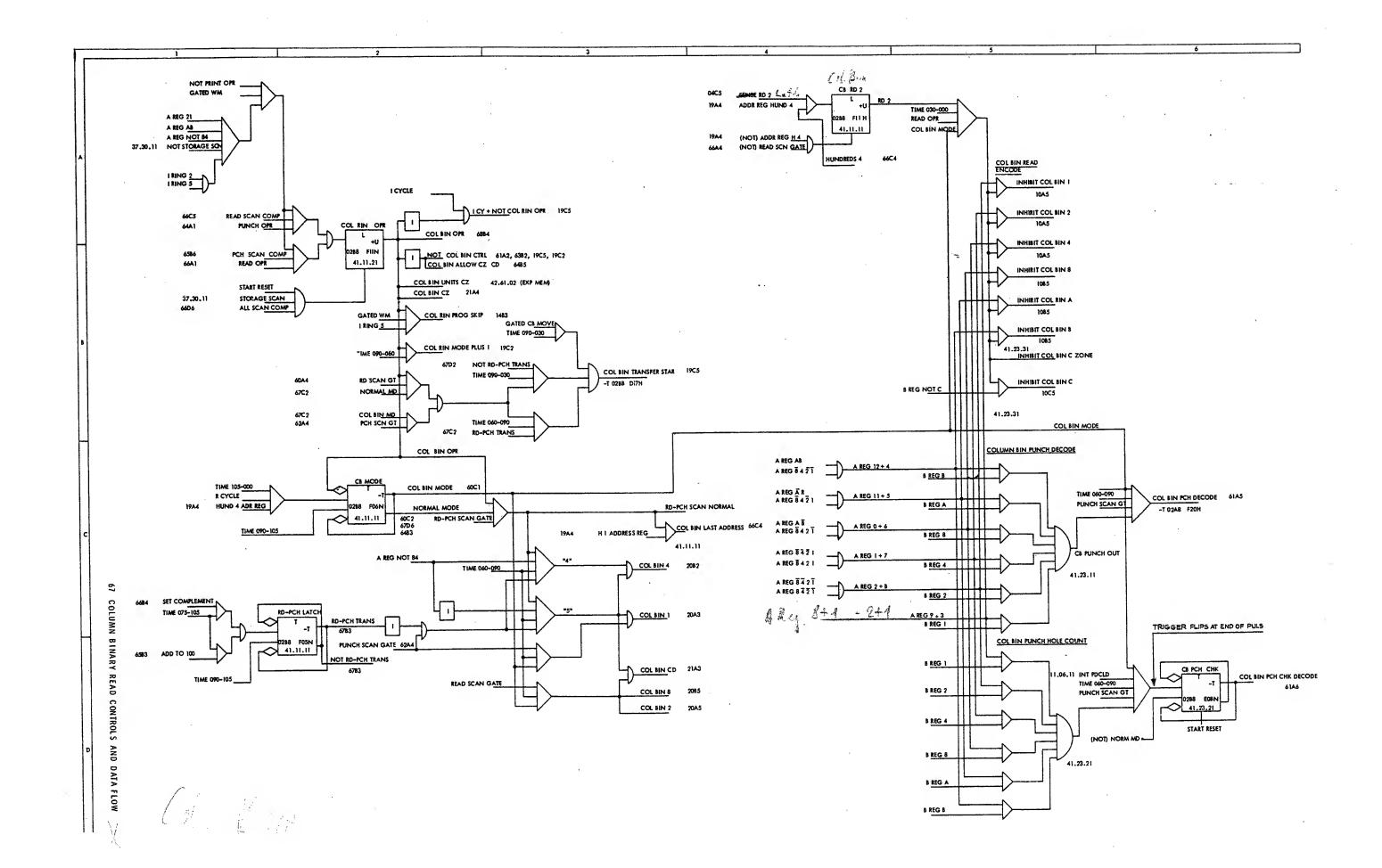
1925 Hundr. Kann micht modifiziert werden, da Not Trans Scan Rohlt. 1925 Bei Transfer Strr immer B-Rey. Transfer für Datan

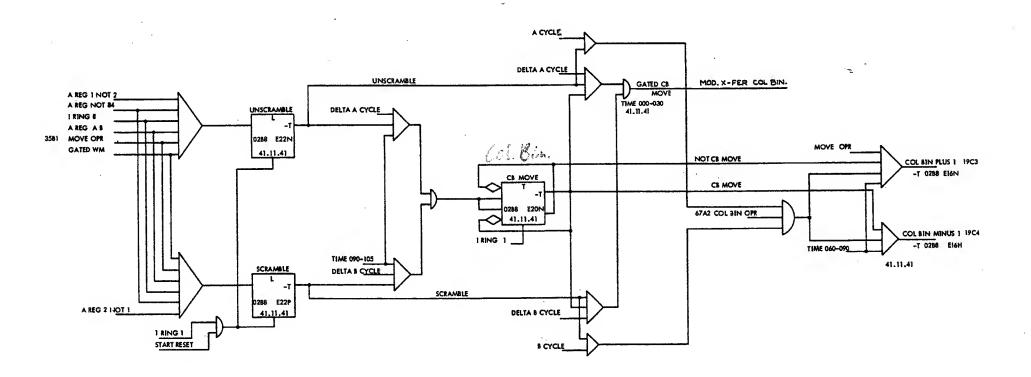
Upper = 1 K Lower = for jede Lothon





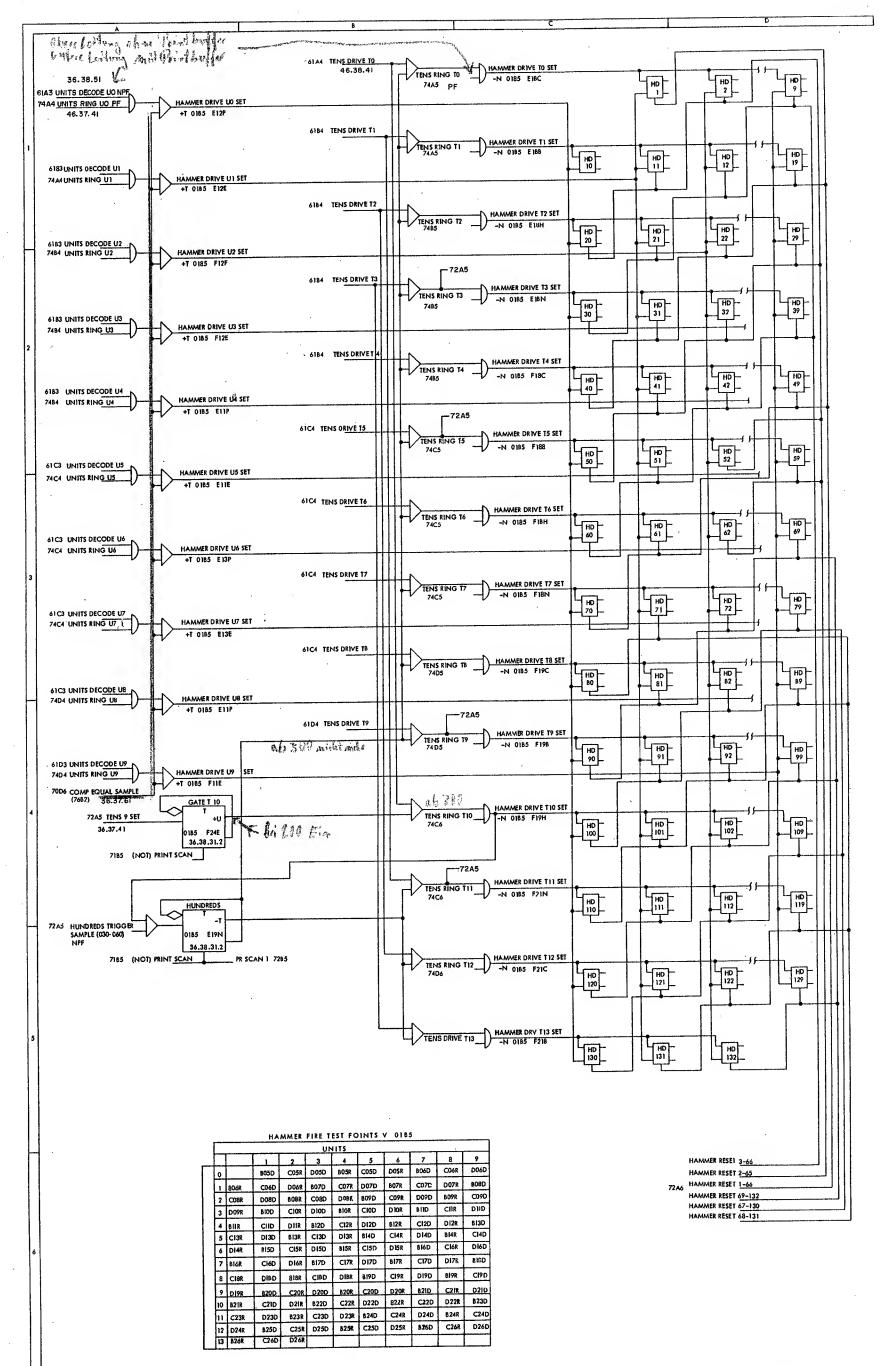


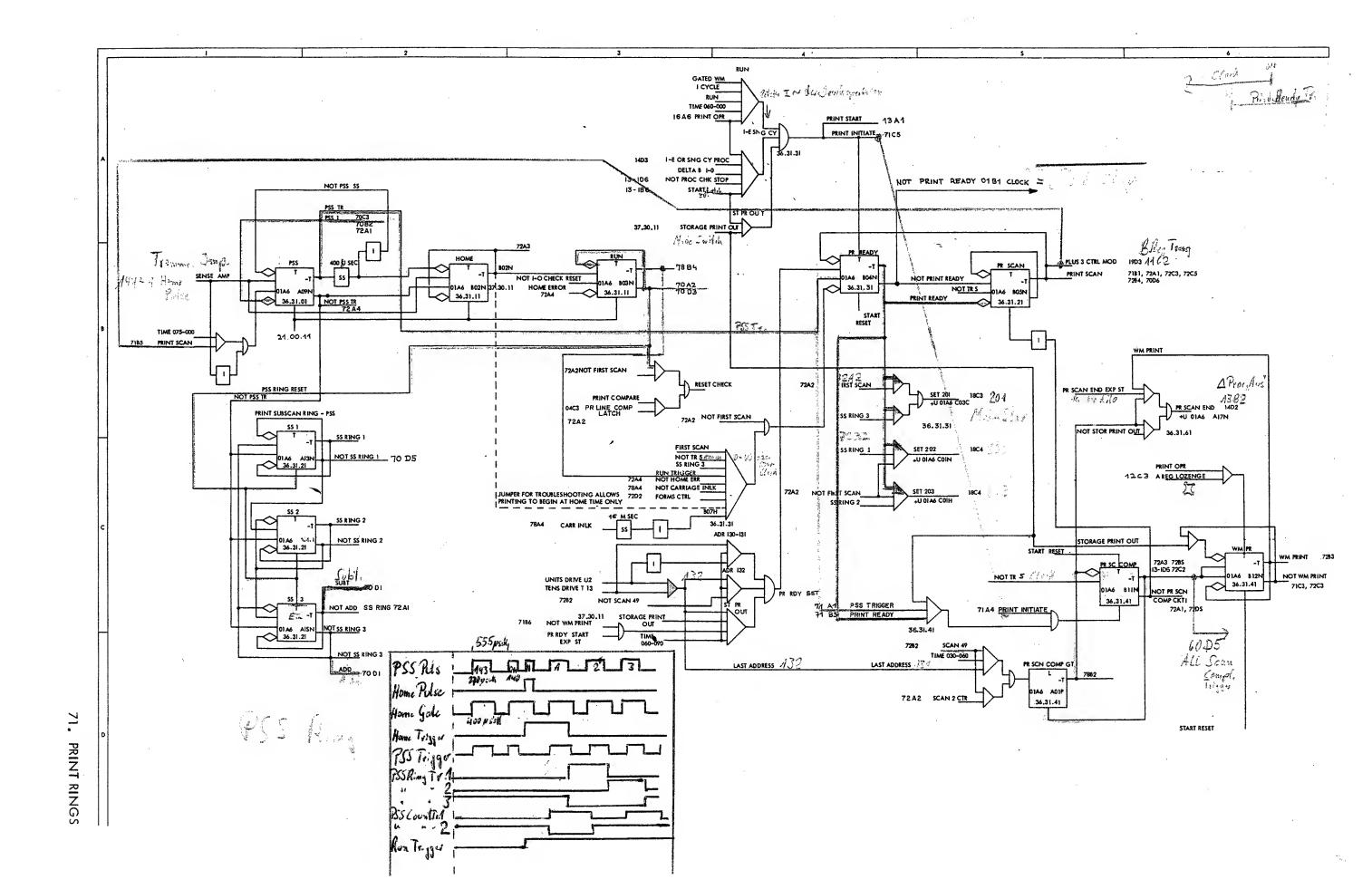


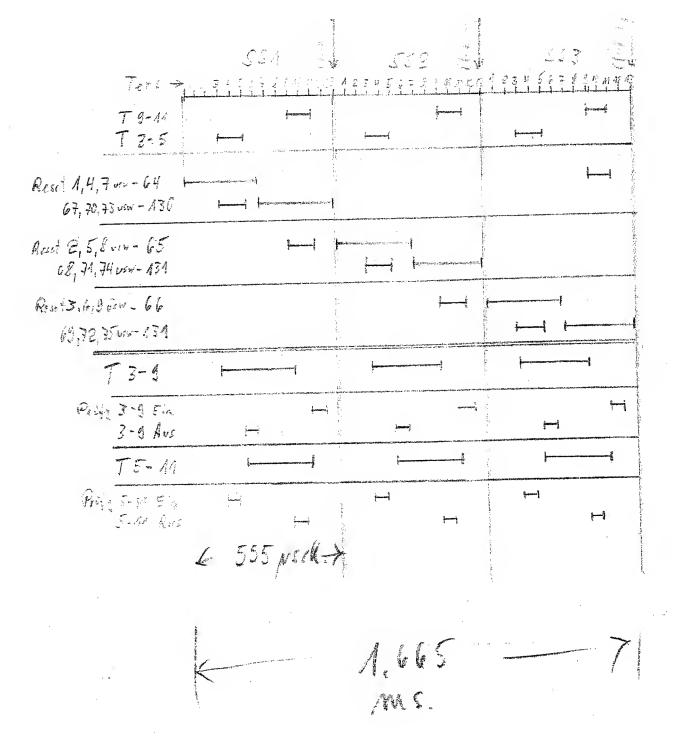


MOVE COLUMN BINARY CONTROLS

Coli Bin





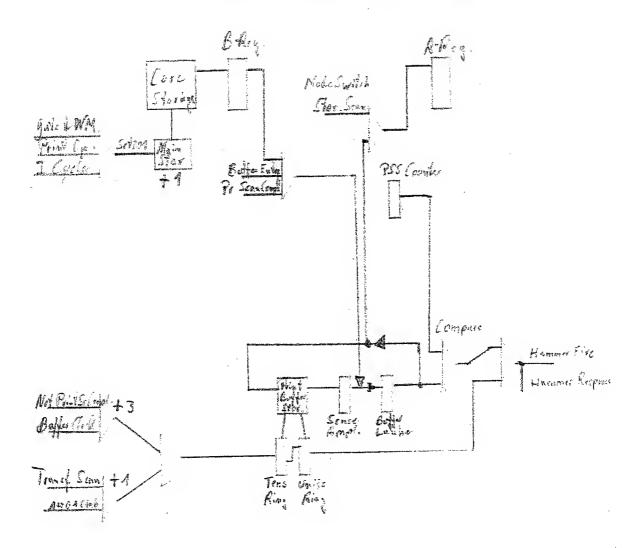


Mesel A-race deliver Latele

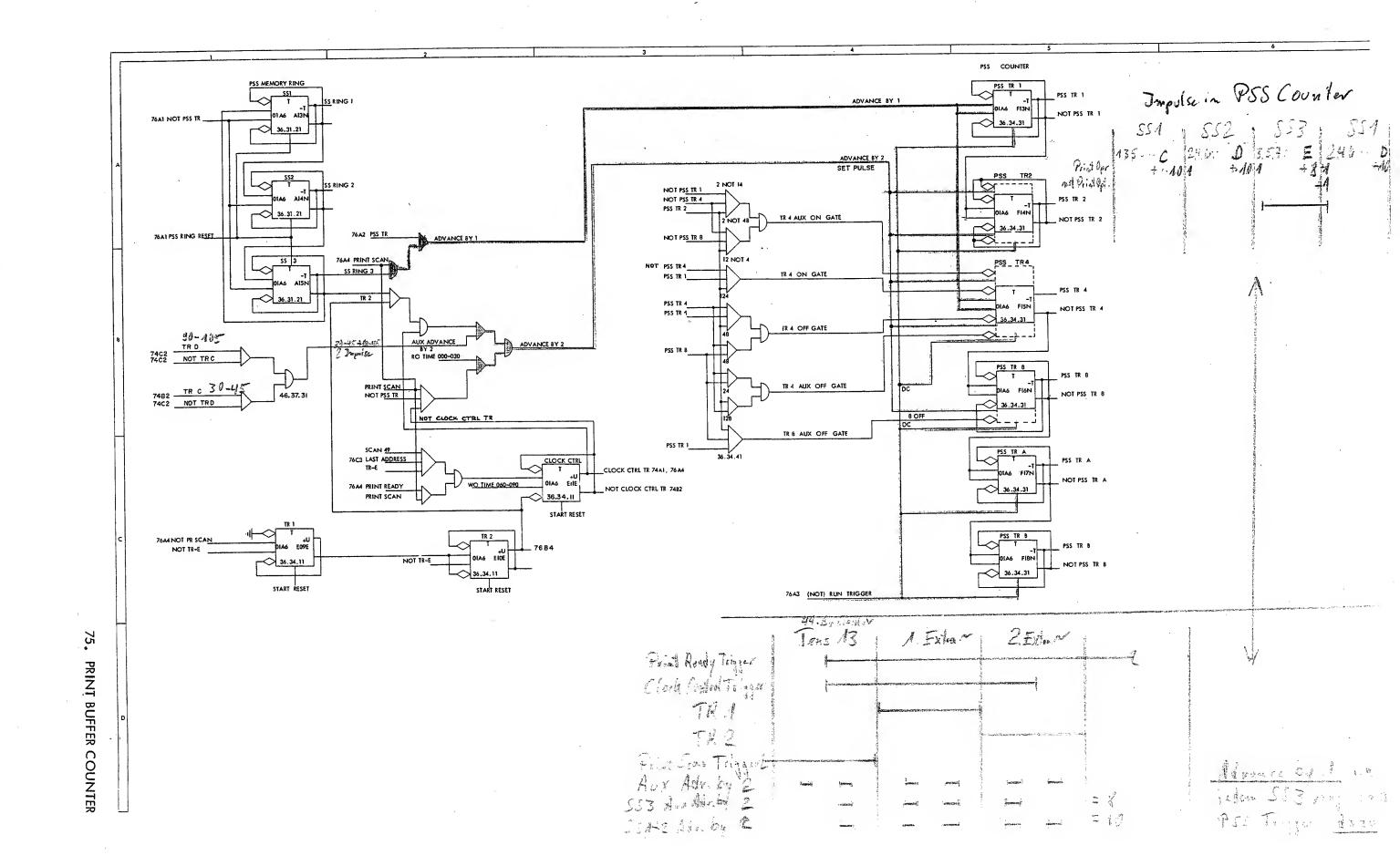
Check

PRINT CONTROLS

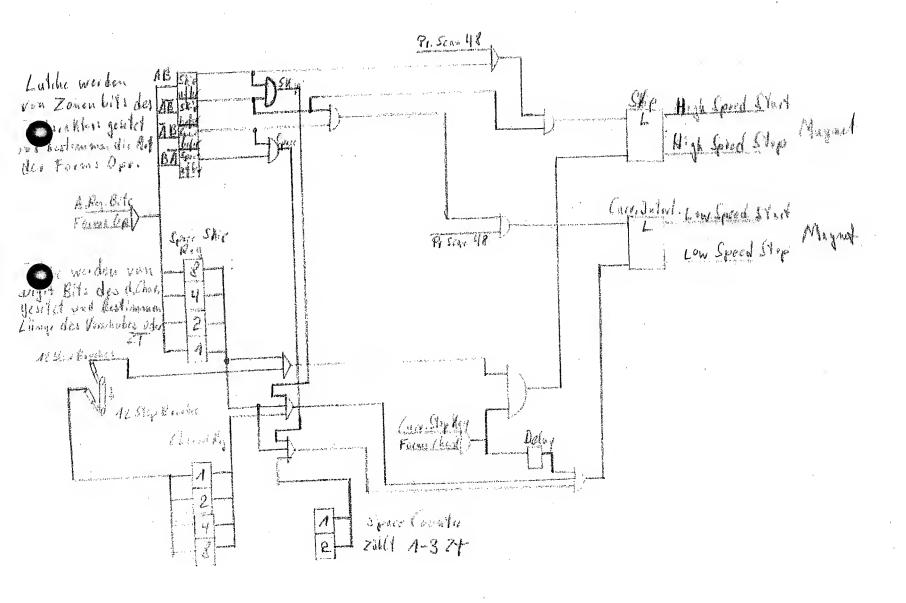
Data Flow Print E. Ho

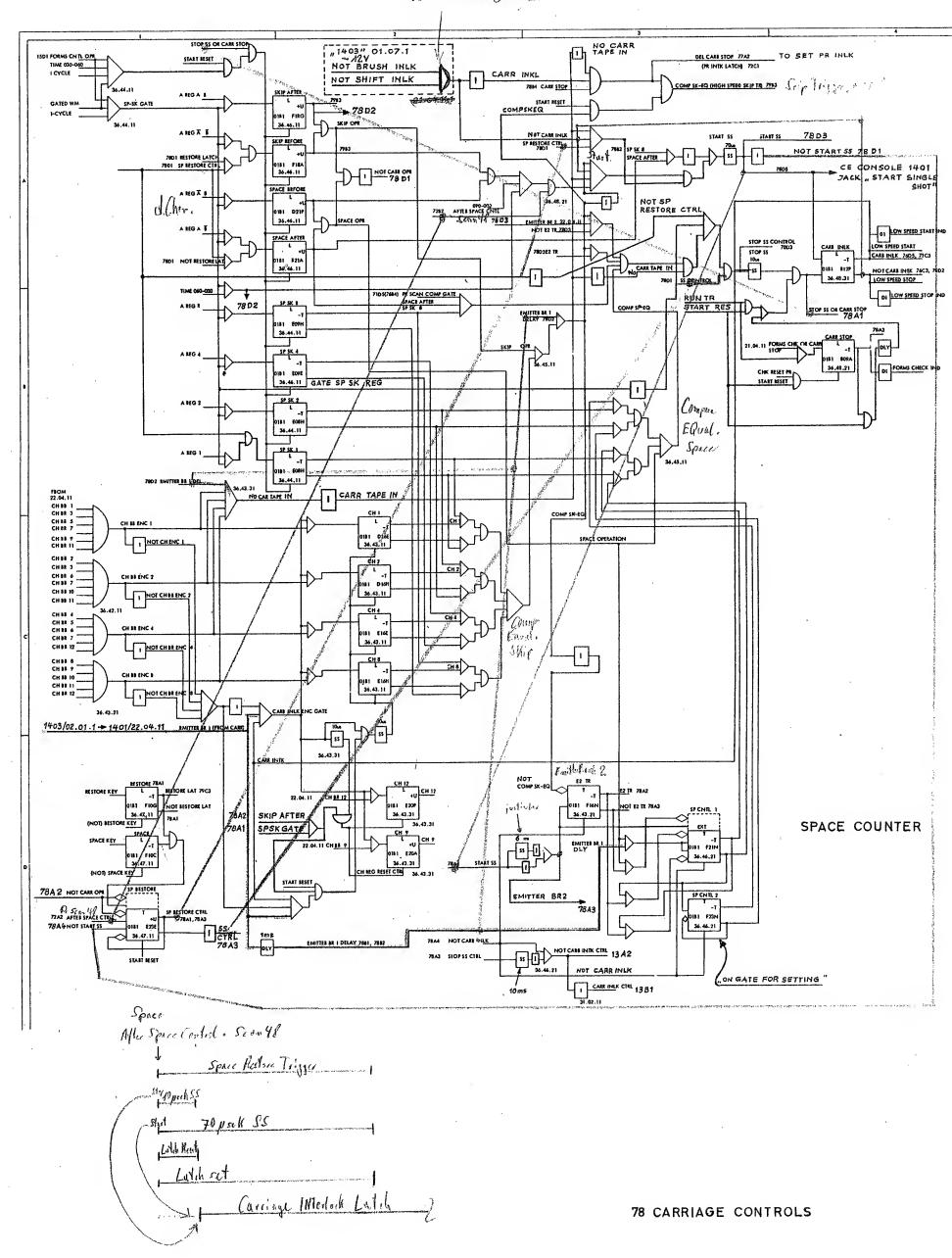


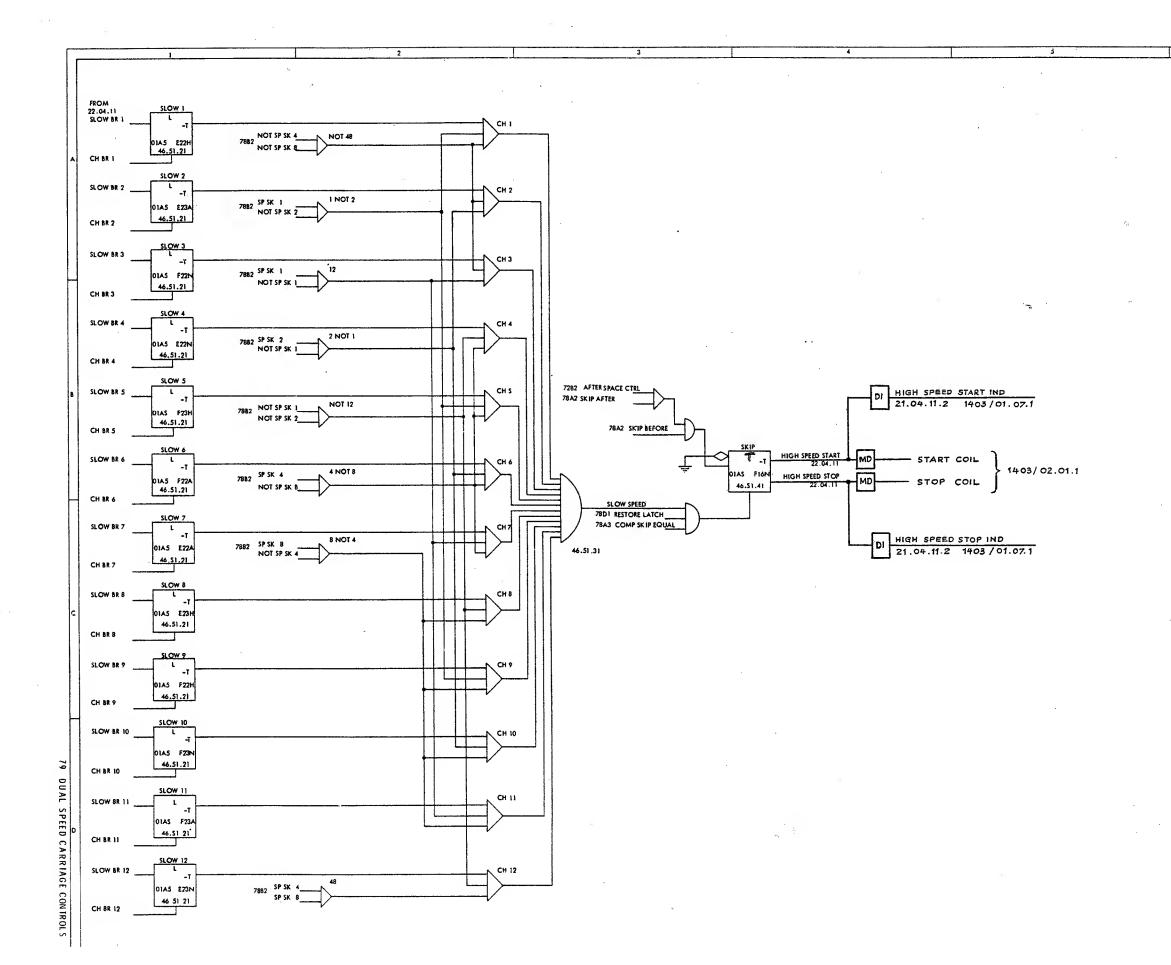
1111 125



	PRINT SUBSCANS (Stage 1 only) Connect 01A6/B02/N MIT 01A6/D17/F, BEI PF D04/B	
PRINT SCANOS 20 30 30 23 5 6 18 9 0 3 2 5 7 U YH XYZ	12 N P R 56 A 6 6 7 7 9 8 9 9 9 9 9 10 10 N P R 2 5 4 1 5 1 1 2 3 4 5 6 7 8 9 1 2 7 7 7 7 8 1 K W D C C - 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1	ON GUEDEN PRINT MODIST
1234 SC 1378 02 / T V X Z	1 K H O Q 5 A B D F H & 7122 4 6 8 0 0 2 5 U W Y Z + 3 K H Q Q 2 + 8 C	
PRINT SCAN 03 S U W V V 4 3 3 5 5 7 9 0 7 7 1 V X 2 3	ѫҡҥпотоп	
4 6 8 0 7 5 U W Y 4 3	JKLNOPQRTS*ABCQEFGHIS "123 "5 5 T B POB #/ ST UV MX YZ ", "J KL NO P NR TS "A CC LE	ore G
4. 6. 8 0. 3 S. U W. Y. * 3. 5 7. 9 3 S. U W. Y. * 3. PRINT SCAN 05	KLMNOPOR = s * A B C O E F G H 1 & " B 1 2 3 \$ 5 \$ T 8 9 O # \$ / 5 T V WX Y Z * 7 * 3 J K LM NO PO R = \$ A B C O E F	6 3
56.78 0 a 'S TU VX XY Z + 3 JK	L N P R S A C E G L S 1 2 5 5 T 8 C # Z T T V X Z Y X J L N P R S A C E G L S 1 2 5 5 7 8 C # Z T V X Z Y X J L N P R S A C E G L S 1 2 3 5 6 7 8 C # Z T V X Z Y X Z Y X J L N P R S A C E G E G	⁶ "1
1 8 0 2 5 U W2 Y + \$ 3 K	``````````````````````````````````````	
PRINT SCAN OF 3	N P & \$ A C E G 16 12 3 5 7 7 9 8 7 T V Y X Z , 7 K N P R \$ A 2 C E F G H 1 C E F G H 2 C E F G H 3 C	1.
PRINT 5CAN 08 2 , J L	N P R S A C E G I . 1 3 5 7 9 7 7 7 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1	1
PRINT SCAN OF 2 3	o ^P o ^P o ^P o ^P o ^P o ^{Po E} e ^P H [*] 6 [*] 6 [*] 2 [*] 4 ² 6 [*]	3 •
TO PRINT SCAN IO	[Q]	. " 3
O A 5. U W Y F T K M O B / T V X Z F J L N O B PRINT SCAN II	, 0 - 4 8 0 F H c = 12 4 6 8 D = 2 S U W Y 1 4 3 K M D D Q - 4 8 C E F G H C = 4 B C	1 ₂
# /- T V X Z + 2 J L N O P	R & A C E G 1 . 1 2 5 7 6 # / S T V X Z 1 4 J L N P R & A C E G 1 5 4 S R S A C E G 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	12,
FRINT SCAN 12 3 3 3 5 U H Y 4 7 K M Q D	4 0 F H 6 H 2 4 6 E 7 3 S V W Y + 7 K M O 0 1 B C F 2 H 6 E 7 S S V W Y + 7 K M O 0 1 B C F 2 H 6 E 7 S S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S V W Y + 7 K M O C C - 1 B C F G H 6 E 7 S V W Y + 7 K W O C C - 1 B C F G W W O C C -	2
PRINT SCAN IS 2 3 3 1 1 N P R	* A C E F G I S * 1 2 3 5 T 7 7 7 T V 8 X Z , 7 J L N D R S A C E F G H I S " 1 2 T S T U W Y Z , 7 T L N D D D D S S A B C D F F G H I S " 1 2 T S T U W Y Y Z , 7 T L N D D D D S S A B C D F F G H I S " 1 2 T S T S T S T S T S T S T S T S T S T	3
T V X Z J L N P R PRINT SCAN 14 S U N Y + X K M 0 Q -	\$ A C E G 1	3 * 5
PRINT SCAN 15	is As Core of Core 12 2 s 2 6 18 70 ma / S 'U M AY THIS TRING CORE IN 18 10 THIS TO 2 N	, e 5,
TU VH XY Z + " % JK L M TO FOR " - " PRINT SCAN 16 2 3	, "B C O E G H 1 & "B 1 2 3 4 5 6 7 8 9 D 3 2 5 1 V V X Y Z 1 , "\$ 3 K L M N O P Q R 3 8 A B C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 3 5 A S C U E F G H 1 % " L 2 3 5 A S C U E	5 ° 7
U H Y T T K M O Q - " T L N P R S T PRINT SCAN 17	A B C D E F G H & D 1 2 3 \$ 5 6 T B P D \$ 3 / S T U W X Y Z \$, \$ J K L M D P R S \$ A B C C E F G H E B 2 3 \$ 5 6 T B P D \$ 2 S \$ 4 S 6 T B P D \$ 2 S	6 ⁷ 6 ;
V X Z	COEFGHI 1 2 3 5 7 8 9 9 4 7 5 TUV X Z 2 3 7 L N 0 P 0 R - \$ A B C E G 1 6 5 1 2 3 5 6 1 6 5 1 2 3 5 6 1	
H Y + 1 K H OZ O - + A	OFF H & D 25 4 6 8 9 7 3 5 7 W Y 2 8 5 K M 9 0 0 2 5 8 C F H & D 2 5 6 7 C F G H & D 2 3 5 6 7 C F G H & D 2 5 6 7 C F	8,6
PRINT SCAN 19	HE 6 H T . 1 3 5 5 7 8 6 2 7 5 T V X Y Z 18 J L N 9 P R S A C D E 6 H 1 6 D 1 2 3 5 7 8	3 0
PRINT SCAN 2D 2 30	-E - G - 1 - 3 - 3 - 5 - 7 - 9 - 9 - 7 - 7 - 7 - 7 - 7 - 1 - 1 - 1 - 3 - 5 - 7 - 9 - 9 - 7 - 7 - 7 - 7 - 1 - 1 - 1 - 2 - 1 - 1 - 1 - 2 - 1 - 1	8
Z		0
7 1 1 1 N P R S A C E	F _G H ₁ F ₁ F ₂ F ₃ F ₅ F ₆ F ₆ F ₇ F ₈ F ₇ F ₇ F ₈ F ₇ F ₇ F ₈	* * * * * * * * * * * * * * * * * * *
1 K M D Q - 2 + 8 D E F A C D E F A	H & H Z 4 6 8 0 3 5 U H Y Y 4 N M C C = 1 0 1 M C M C M C M C M C M C M C M C M C M	a [*] /s
	5H1 6 0 1 2 3 4 5 6 7 8 9 0 8 3 / 5 7 U V W X Y Z 4 3 3 K L H N D P O R 2 8 A 8 C O E F G H 1 6 0 1 2 3 4 5 6 7 8 9 0 8 2	* * * * * * * * * * * * * * * * * * * *
	1 6 0 2 4 5 6 7 8 9 0 2 7 5 TU W X Y 2 4 2 1 KL M O Q Q - 5 A 8 C D E GH T C 1 2 3 4 5 6 7 8 9 0 2 7	s u
PRINT SCAN 25	6 6 7 8 9 mm 8 m 1 2 m rs	
PRINT DUAN 20	7 8 9 0 1 4 4 8 20 8 5	3 U
PRINT SCAN 27	12 2 4 8 70 78 5 W W Y 7 4 18 K W C C - 4 B D F H 6 H 2 4 6 C C - 4 B D F H 6 H 2 4 6 C C - 4 B D F H 6 H 2 4 C C C C C C C C C C C C C C C C C C	₹
N P R S A C E G 1 . PRINT SCAN 28	H, Z, Y, O, O, Y,	/ X ខ្ញុំ ម៉ូ
PRINT SCAN 28	1 3 5 7 9 8 7 1 8 7 2 4 2 4 2 4 1 6 7 2 4 2 5 T U V X Y Z 4 2 K L N O P C R 5 8 C C E F G H 1 6 0 1 2 3 5 6 7 8 9 0 1 2 7 5 T U V X Y Z 4 2 K L N O P C R 5 8 C C E F G H 1 6 0 1 2 3 5 6 7 8 9 0 1 2 7 5 T U V X Y Z 4 2 7 7 5 T U V X Y Z 4 2 7 7 5 T U V X Y Z 4 2 7 7 5 T U V X Y Z 4 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
	1 3 5 6 7 8 9 4 2 / S 7 U W X Z 2 , 3 J K L N 0 P R 3 A B C P E G H 1 C 1 2 3 5 6 7 8 9 0 # 2 / S T U W X Z 2 , 3 J K L N 0 P R 3 A B C D E G H 1 C 1 2 3 5 6 7 8 9 0 # 2 / S T U W X	
PRINT SCAN SU 2	2 4 6 7 8 0 a 5 U W Y Z 4 2 K M D P Q 2 8 4 8 C C E G H E B 1 2 3 5 6 7 8 9 0 4 2 5 U W X Z 4 2 K M D P Q R S 8 8 C C E G H E B 1 2 3 5 6 7 8 9 0 4 2 5 U W X	
PRINT SCAN 31 2 PRINT SCAN 31 2 PRINT SCAN 31 2 3 PRINT SCAN 31 2 PRINT SCAN 31	3 5 7 8 9 0 8 3 / 5 TUV X Z 2 9 3 KL N D P Q R S A B C D E G H 1 6 " 1 2 3 5 5 7 8 9 0 8 8 / S T UV X Y	ž z * ,
PRINT SCAN 32	15 1 9 0 a S U W Y Z 4 2 K M O D R - 4 8 8 C E F G H C D 2 4 6 7 9 D 3 / S T U W X Y Z 5 6 7 8 9 D 3 / S T U W X Y Z	3 * '1
PRINT SCAN 33	7 8 2 9 1 4 7 1 X Z	3
PRINT SCAN 34	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· · · · · · · · · · · · · · · · · · ·
SACCEGIC 123 5	6	* * * * * * * * * * * * * * * * * * *
A C E G 1 . 1 3 56		3 1, K 3
PRINT SUAN 50	38 Q a / \$ U W Y Z * * * K L M O P Q R * * A B C O E F G H 1 6 * D 2 3 5 O T B O B / \$ T U W X Y Z * * * J B O G B / \$ T U W X Y Z * * * J B O G B / \$ T U W X Y Z * * * J B O G B / \$ T U W X Y Z * * * J)
A B C C E G M I N 1 2 3 5 6 7 PRINT SCAN 37 12 3 5 6 8 6 1 1 2 3 5 6 8	8 0 8 5 0 W Y * X K P C L T 8 C E G T C 9 1 3 5 7 9 9 7 7 1 T V X X Y Z + 3 J 4 0 8 5 T V X X Y X	KLMH
PRINT SCAN 38	3, a c b u y 45 a K M o o o y 7 a a o e H a b 22 4 a 6 B o a 5 t u w y z 4 3 K	^L r [™] Nc
D F H S 1 2 3 5 7 8 P F F F F F F F F F F F F F F F F F F	0	N N N
D F H & " 23 45 67 8 0	# a / 5 T U V N Y Z * , * J K L N V P V R - \$ "A "C V E 'G 'I V . T I - 3 'S 'T Y . # / 'T Y X Z , J L	-
0 F H & D 2 4 6 8 9 #	3 S U W X X K M D D R S A B D E G H B C D 2 3 5 7 8 9 D 3 5 T V M X Y Z X K M D D D C S A B D E G H C D 2 3 5 5 7 8 9 D 3 5 T V X Y Z X K M D D D C C C G H C D 1 2 3 5 5 7 8 9 D 3 7 T V X Y Z X X K M D D D C C C C G H C D D C C C C T C T T T T	3
C DE F G H 1 2 3 5 7 8 9 PRINT SCAN 40 C E G H 2 1 2 3 5 7 8 9 PRINT SCAN 40 C E G H 2 1 2 3 5 7 8 9 PRINT SCAN 40 C E G H 2 1 2 3 5 6 7 8 9 0 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8 9 8	3/570 W X ' Z ' * 3 K M D P Q R - \$ AB C D E F OH ' E ' D ' Z 3 A ' 6 ' B ' D ' A ' 5 ' U M Y ' F X K M D P Q R - \$ AB C C E F G H ' E ' D 1 Z 3 A 5 6 ' B ' D ' A ' Z ' Y ' X ' Z ' Y ' Z ' X J K L M D P Q R - \$ AB C C E G H C D 1 Z 3 A 5 6 7 8 9 B R / S T U V K X Z ' X J K L M D P Q R - \$ AB C E G H C D 1 Z 3 A 5 6 7 8 9 D R Z S T U V K X Z ' X J K L M C Z K L M C	c _p c _p t t
F H & H 2 4 6 8 0 F G 1 2 1 2 3 5 4 8 9 F 2	7 5 7 U W X Z * 7 3 L N P R \$ A C E G 1	a -
PRINT SCAN 43	2 4 5 6 7 8 20 84 72 10 42 74 JK ² LM NO I	>q 3~
GH 16 . 8 12 34 56 78 90 #2 .	37 TU V W X Y Z & , \$ 3 K L M NO POQ R - \$ \$ * AB C C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 T U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 T U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 T U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 T U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 T U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ * AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8 8 , \$ 5 U V W X Y Z * , \$ 3 J K L M NO POQ R - \$ \$ AB C C E F G H 1 6 . 8 12 2 3 4 5 6 7 8 9 0 8	
H & H 2 & 6 & 8 C & a / 5	TU N Y Z + Z K M O P CR " s A S C E G II S " I Z 3 S 5 7 8 9 7 8 7 V X Y Z + 7 X K L NO P C U N X Y Z + 7 X K L NO P C	
1 5 5 7 8 9 0 a 7 5	3V X Z , 3 J L N3 P R S A C E G 1 C 1 2 3 5 7 8 0 8 7 5 T V X Z 4 7 X K M O P Q	3
PRINT SCAN 46	3	
PRINT SCAN 47	3x, z, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	A C
PRINT SCAN 48	"X 'Z '; "J "L "N "P "R \$ A C E G I + I 3 3 1 7 7 7 1 1 7 7 1 7 7 1 7 7 1 7 7 7 7	ABCC CD
1. 3. 3. 7. 9. 4 7. 5 U W	x _Y z ₄ + 3 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6 + 6	A B C
12 34 56 78 90 #a 5 70 N	Y 2 , 3 , 1 L N P R & A C E G I C + 1 3 5 6 T 8 9 7 8 7 T V K TZ 7, T 1 L N P R & A	∖ C _c E







Rot 2.3.1980

Progr RV 230 CO4 Rewind Blett out

Will Loud Point von CO3 exhalten blett!

Loud Pt Latin zu spet Resed. (an Indicator zuschan)

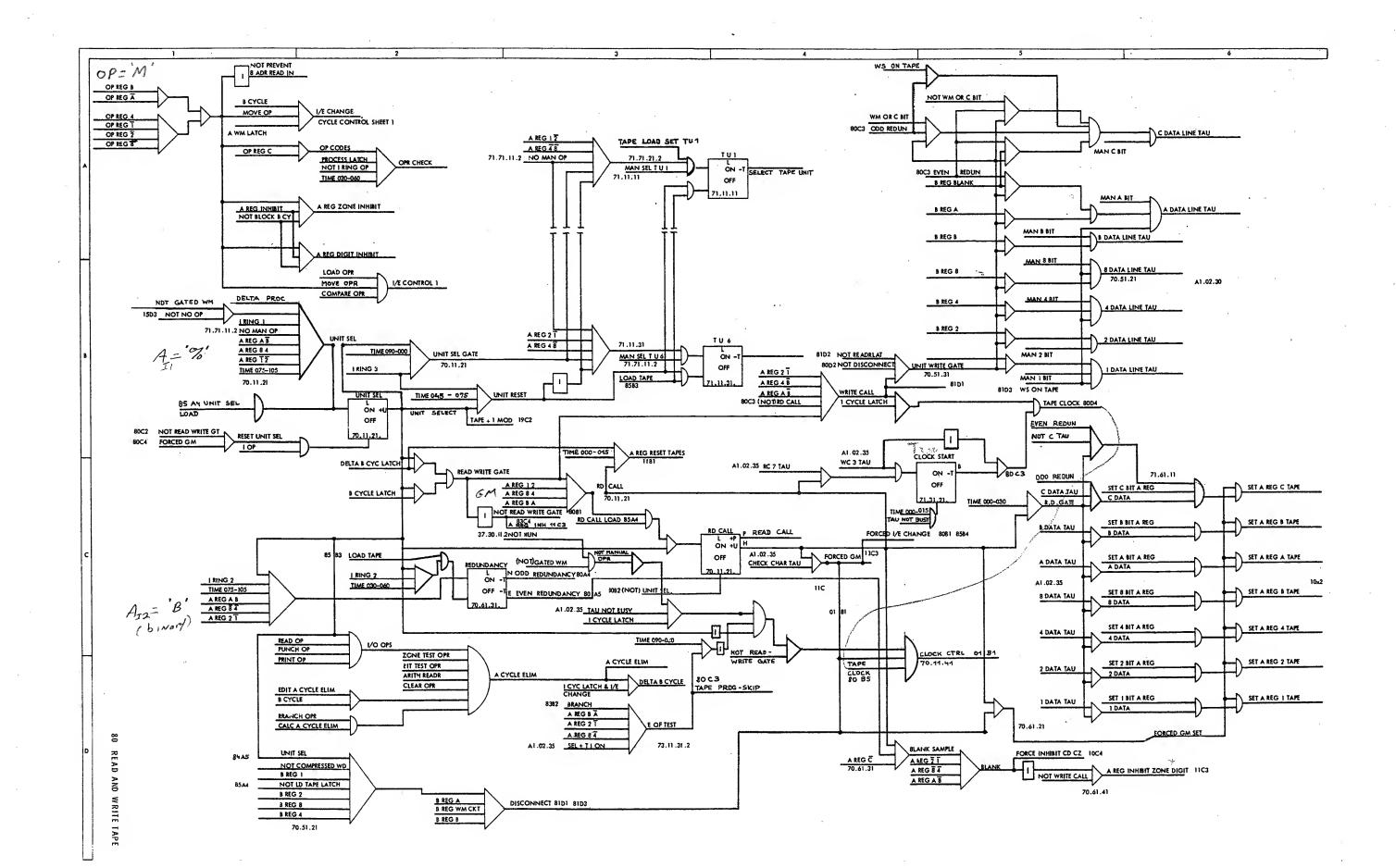
- U Loud Pt. (71.31.21.)

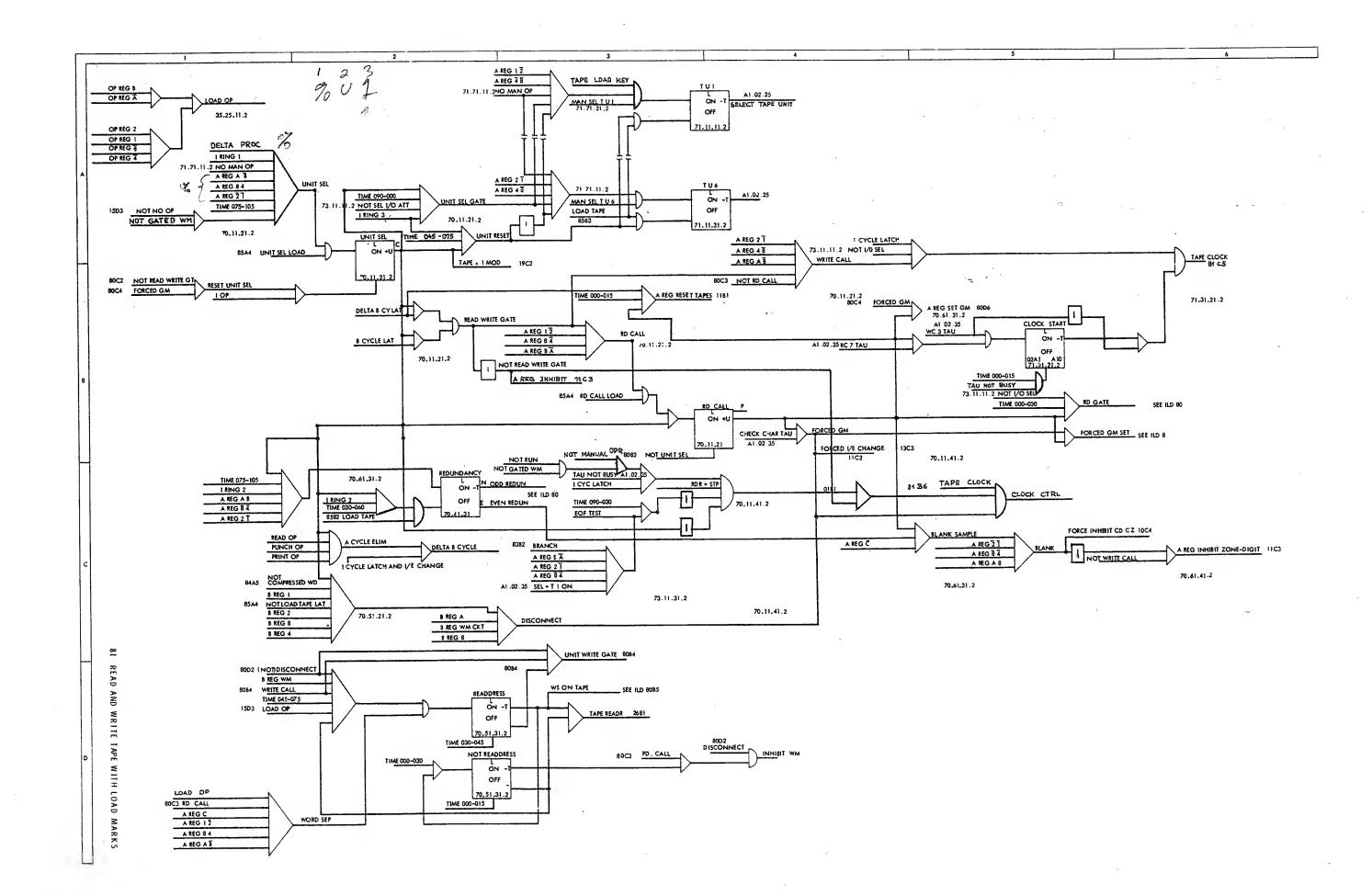
LP Latin (89.60.02)

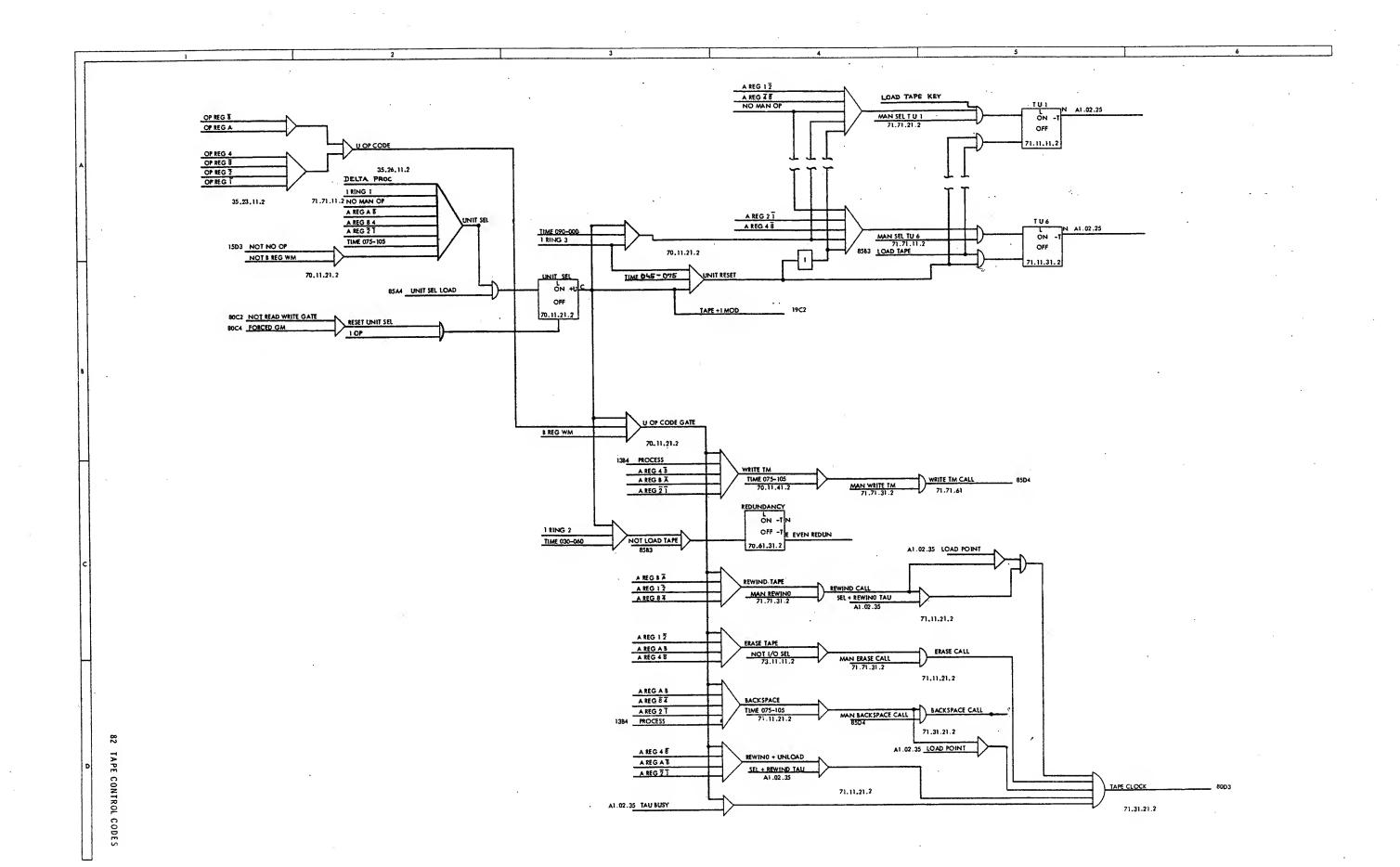
DB2 Worder in O2B2 CO8-CO3 getenscht

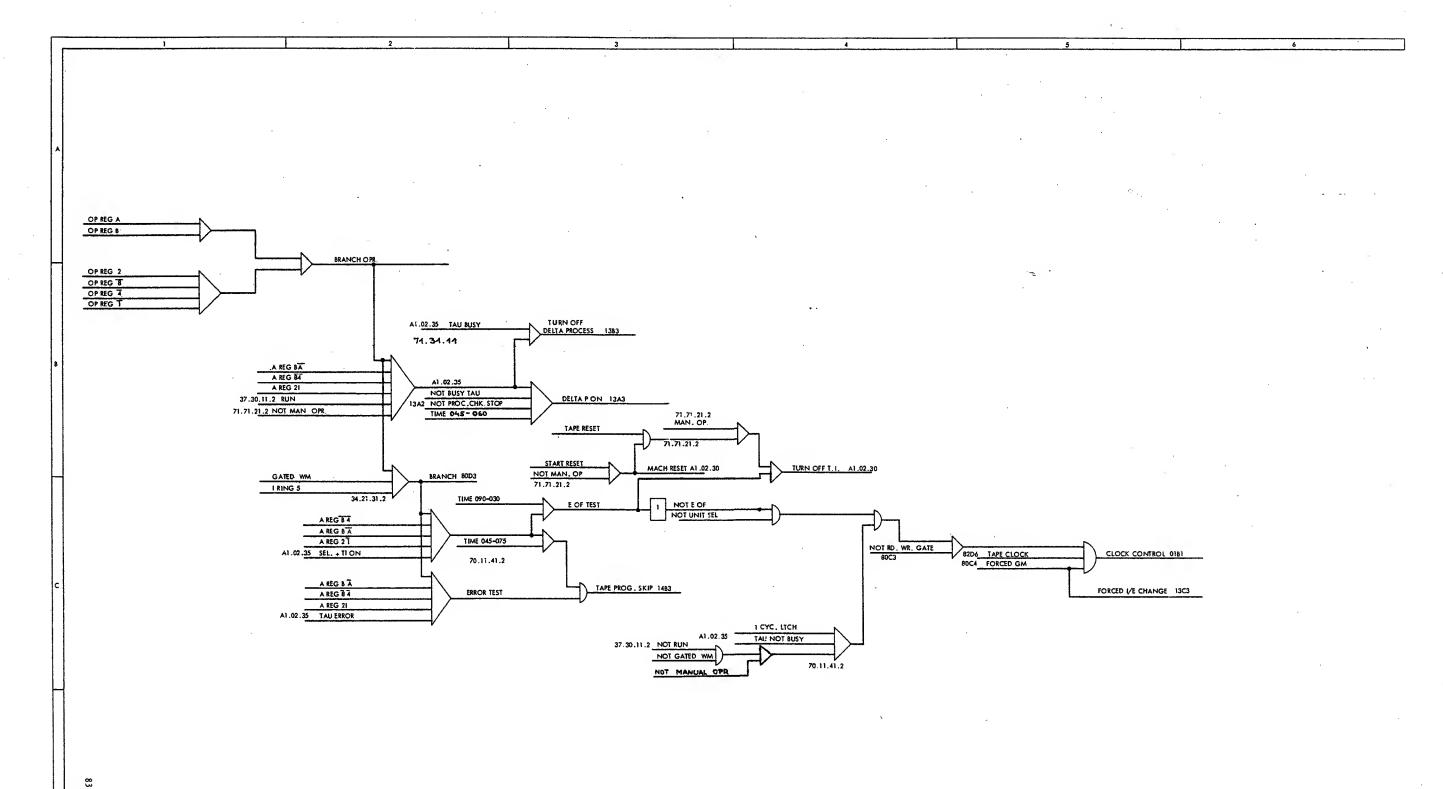
A·B System Co9 wird

Airest benochd

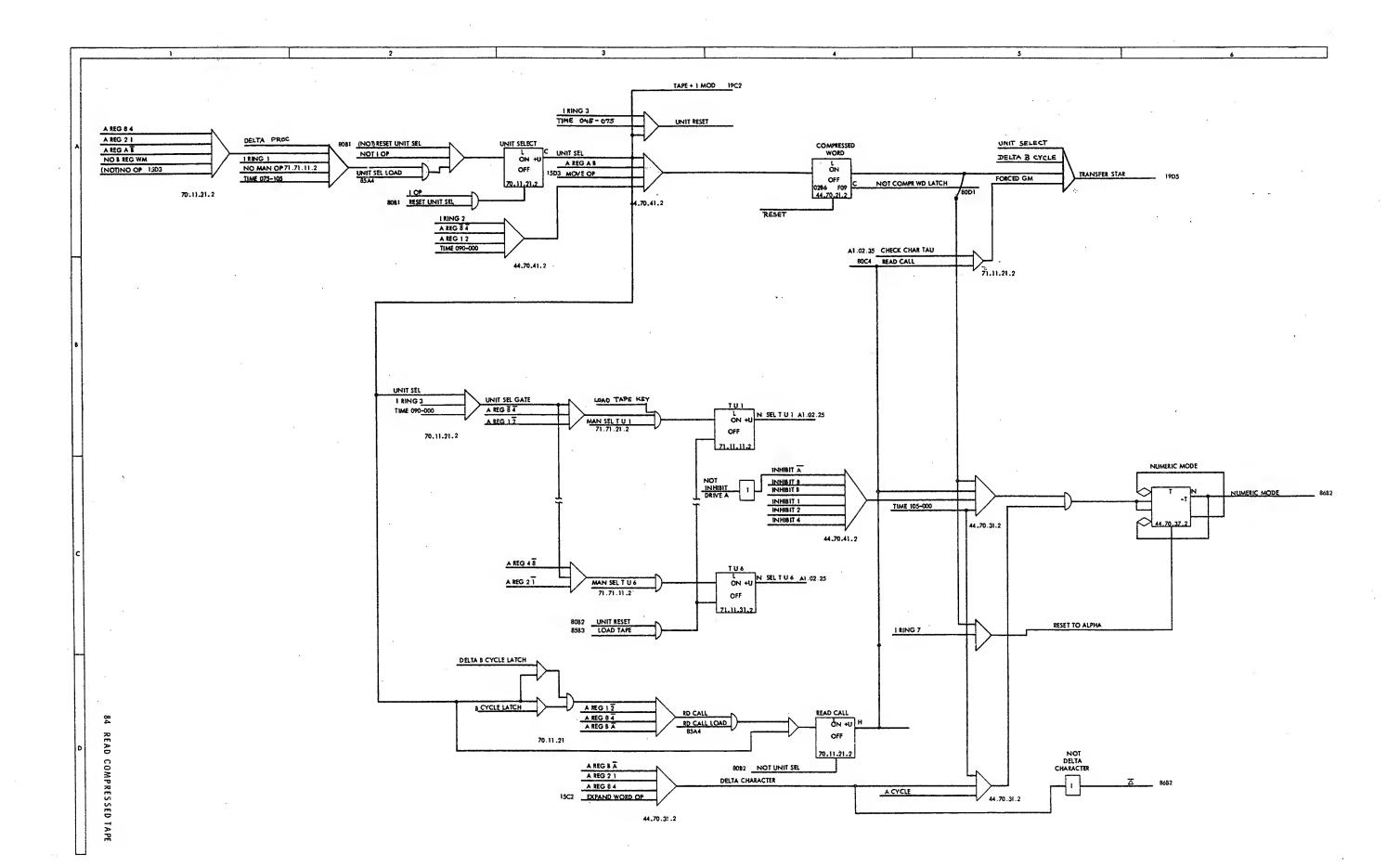


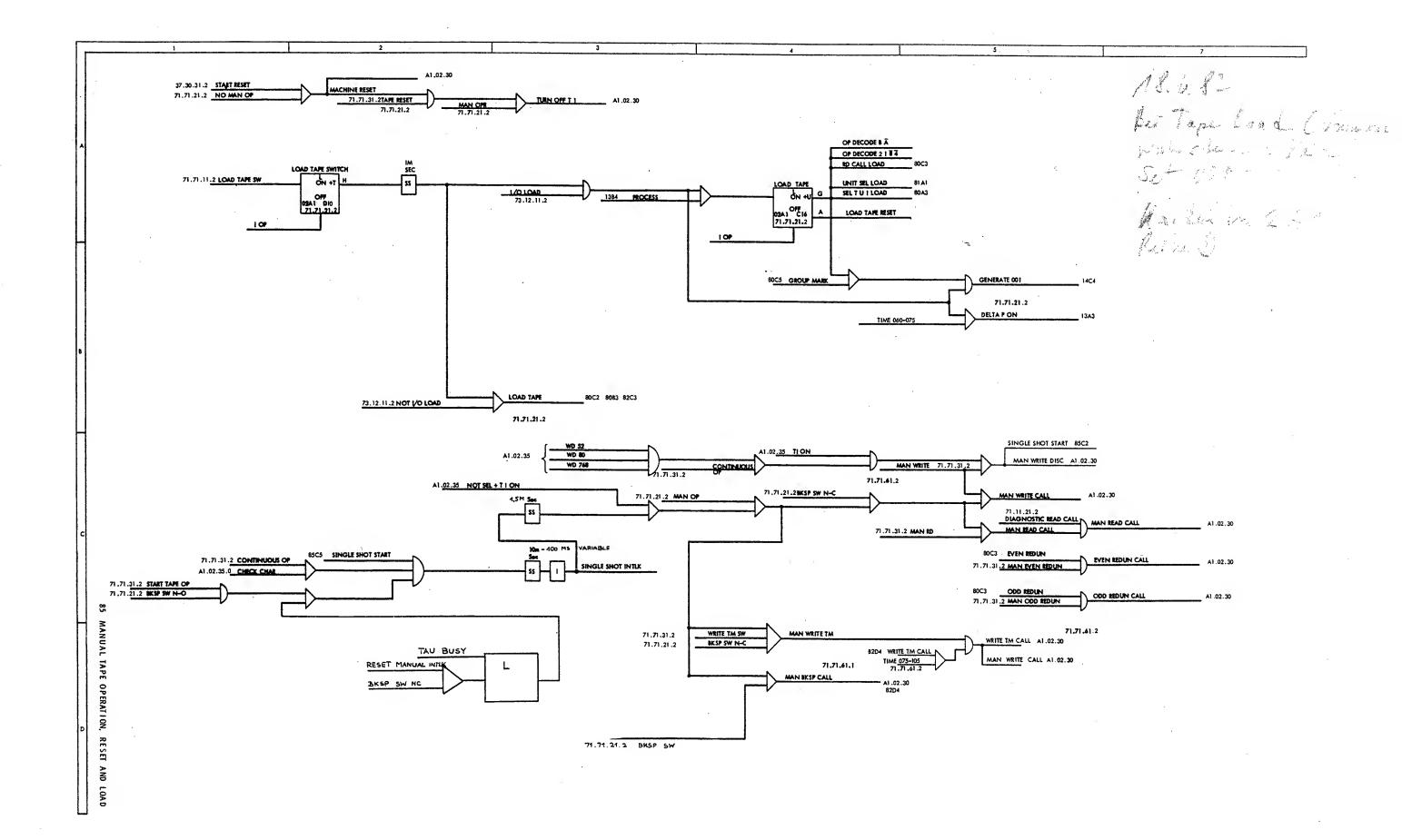






TAPE BRANCH CODES





14D3 & CYCLE NOT BLOCK OPR TRANS A REG DIGIT ZONE 15C2 OF DECODE AT 15C2 OF DECODE 4218 EXPAND WORD OF 15C2 44.70.21.2 44.70.11.2 INDEX PREVENT GATED WM 1444
44,70,21.2 NOT I CYCLE IST B BIT NOT 2ND B BIT ON+U 84D5 NODELTA CHAR NOT 84D5 NOT 2ND 8 BIT GM 84D5 NO DELTA CHAR NOT GM 0286^{OFF}F25 44.70.41.2 A REG SA A REG AS TIME 090-000 B4C6 NUMERIC MODE
B CYCLE 44.70.41 EXPAND WORD OF I CYCLE 2ND 8 8 IT A CYCLE ELIMINATE 13D3 A REG AS E/I CHANGE 13C3 A REG SM A REG 12 B CYCLE ZND 8 BIT TIME 0,75 -405 ON +U 44,70,21.2 OFF +U 44.70.31.2 A CYCLE 44.70.21.2 TIME 105-000 B REG WM ON ON 44.70.21 I RING OP OFF -T I RING OF 44.70.21.2 TIME 405 - 000

86 EXPANDED TAPE

